MAY 13 1955

Journal of
PROJECTIVE TECHNIQUES

PUBLISHED BY THE SOCIETY FOR PROJECTIVE TECHNIQUES
AND RORSCHACH INSTITUTE, INC.

BUCKNELL UNIVERSITY LIBRARY
AUG 9 1955
LEWISBURG, PA.

TABLE OF CONTENTS

Editorial 2

Working with Dr. Hermann Rorschach
GERTRUD BEHN-ESCHENBURG 3

Rorschach Test Correlates of Assaultive Behavior BEN C. FINNEY 6

Stimulus Value of the Rorschach Cards:
A Composite Study ..... C. E. GEORGE 17

The Relationship Between Hostility in the TAT and
Behavioral Hostility ..... MARTIN R. GLUCK 21

A Note on the Use of the Word Association Test as an Aid to
Interpreting the Bender-Gestalt ..... RICHARD S. GREENBAUM 27

Reflections of the Acculturation Process in the
Rorschach Test ..... BERT KAPLAN 30

Thematic Apperception Test: A Note on Reliability and Situational
Validity ..... GARDNER LINDZEY and PETER S. HERMAN 36

The Relative Difficulty of the Rorschach Cards ..... BERNARD MEER 43

Personality Development as Reflected in Rorschach Behavior:
A Case Study ..... T. W. RICHARDS 54

Lowenfeld Mosaics Made by First Grade Children
URSULA G. STEWART and LORRAINE A. LELAND 62

Psychosexual Identification in Paranoid Schizophrenia
ABRAHAM M. ZEICHNER 67

Book Reviews 78

General Newsletter 87

Announcements 89

Directory 92

Volume 19 March 1955 No. 1

155069

OFFICERS OF THE SOCIETY FOR PROJECTIVE TECHNIQUES AND RORSCHACH INSTITUTE, INC.

President . . . . . SAMUEL J. BECK
President-Elect . . . . . JULES D. HOLZBERG
Past President . . . . . SAMUEL KUTASH

Representatives at Large

Eastern . . . . . ROY SCHAFER
Western . . . . . WILLIAM F. HENRY
Secretary . . . . . RACHEL D. COX
Treasurer . . . . . GORDON DERNER
Editor . . . . . BRUNO KLOPFER
Executive Editor . . . . . BERTRAM R. FORER

• • •

ADVISORY COMMITTEE

FRANKLIN G. EBAUGH
LAWRENCE K. FRANK
BRUNO KLOPFER, *Chairman*
NOLAN D. C. LEWIS
MORTIMER M. MEYER
GARDNER MURPHY
DAVID VORHAUS

JOURNAL OF PROJECTIVE TECHNIQUES, published quarterly by the Society for Projective Techniques and the Rorschach Institute, Inc. Annual subscription (calendar year) $6.00, foreign $6.50. Publication office: 210 E. Wilson Ave., Glendale 6, Calif. Subscriptions, changes of address and business matters should be addressed to the Society for Projective Techniques and Rorschach Institute, Inc., 210 E. Wilson Ave., Glendale 6, Calif., or 609 W 196th St., New York 40, N. Y. Address all Editorial Matters to: Bertram R. Forer, 2170 East Live Oak Drive, Los Angeles 28, Calif. Entered as 2nd class matter at Glendale, Calif.

Copyright 1955 by the Society for Projective Techniques and Rorschach Institute, Inc.

JOURNAL OF PROJECTIVE TECHNIQUES

VOL. 19 MARCH 1955 NO. 1

• • •

EDITOR

BRUNO KLOPFER

EXECUTIVE EDITOR

BERTRAM R. FORER

ASSOCIATE EXECUTIVE EDITORS

WALTHER JOEL

EDWIN S. SHNEIDMAN

EDITORIAL ASSISTANTS

DOROTHY V. ANDERSON
HERBERT C. GOLDENBERG
LEONARD B. OLINGER
JEANNE M. REITZELL
IRLA LEE ZIMMERMAN

ASSOCIATE EDITORS

THEODORA M. ABEL
SUSAN DERI
FLORENCE DIAMOND
MARGUERITE R. HERTZ
ROBERT R. HOLT
LOIS B. MURPHY
L. JOSEPH STONE
PAULINE VORHAUS
JOHN WEIR

EDITORIAL

With this issue there is a notable change in the personnel of the Editorial Staff of the Journal: Dr. Mortimer M. Meyer has completed five years as Executive Editor. (Dr. Bertram R. Forer is now Executive Editor and Dr. Walther Joel and Dr. Edwin S. Shneidman occupy the new positions of Associate Executive Editors.)

Dr. Meyer's tenure as Executive Editor was distinguished by a singular increase in the circulation, prestige and influence of the Journal.

His decision to resign as Executive Editor—a decision which he did not reach lightly—was caused in large part by his increased professional responsibilities, including membership in the American Board of Examiners in Professional Psychology.

To know Dr. Meyer is to become immediately attracted by his personal qualities: his forthright and courageous leadership, his uncompromising approach to principle, and his devotion and dedication to his profession.

Happily, his advice will continue to be available to the Editorial Staff, inasmuch as he has become a member of the Advisory Board of the Society.

BRUNO KLOPFER, *Editor*

Working With Dr. Hermann Rorschach

GERTRUD BEHN-ESCHENBURG

The following recollections are offered in response to your kind invitation to tell what I remember of the work with Dr. Hermann Rorschach during the last years before his untimely passing.

My late husband, Hans Behn-Eschenburg, took his practical training in psychiatry at the *Kantonale Irrenanstalt*, Herisau, Switzerland. He went there at the suggestion of Professor Eugen Bleuler who had expressed the highest regard for the talents of Dr. Hermann Rorschach, then senior physician at that institution. Thus Behn-Eschenburg came into close contact with Rorschach's ceaseless and untiring efforts to further develop his percepto-diagnostic experiment. At that time Rorschach felt the urgent need for a parallel set of ink-blots. He writes in his *Psychodiagnostics:*

> Two to three parallel sets of blots are needed. It is often necessary to test the same subject several times: normals in different moods, manic-depressives in different phases, schizophrenics in different states, before and after psychoanalysis, etc., often just for experimental control. If the test is repeated with the same plates, conscious and unconscious memory effects will contaminate the results. For this purpose we need analogous sets of blots which ought to be as different as possible from the original set and yet ought to correspond to it, plate by plate.

Rorschach was also aware of the necessity to check his own results with those of a new set of blots, which had to be done with new, hitherto unused material.

Behn-Eschenburg was particularly interested in problems of development, and he intended to do large-scale testing through successive age levels, beginning with the youngest possible. In this way it was hoped to shed light on important psychological problems, general as well as differential, and to examine pathological deviations, such as accelerated and retarded development, childhood neuroses, incipient stages of mental illness, character disorders, etc.

It was finally agreed to begin testing with the new set of plates, to be created, at age levels 13 to 15 years, because precisely at puberty and prepuberty significant changes as well as findings of general validity could be expected. This was the first such experiment with children.

Whoever wanted to work with Rorschach on his percepto-diagnostic experiment had first to submit his own person to the 'procedure.' Rorschach worked out a psychogram which he would show you and discuss with you very candidly. Not until this was done would he initiate you into working with his experiment.

Nowadays, that the 'Rorschach' is so well known, it is perhaps hard to imagine how strange and difficult it was in those days to understand that its significance lay primarily not in the content but in the formal aspects of the responses. Dr. Rorschach, in his friendly and exceedingly helpful manner, took great pains to acquaint my husband and me with his work. We, in turn, 'tested' everyone we happened to run into. The responses were scored by us and submitted to Rorschach for checking. Nearly every day big disputes arose about the scoring. The M responses in particular caused a lot of debate. Rorschach, in his *Psychodiagnostics,* says that he considers the scoring of M as one of the most vulnerable spots in his experiment:

> Here the personal equation of the examiner, depending on his imagery-type, will have the most distorting effect. If it comes to the worst, some sort of statistical procedure ought to be used here in order to avoid false conclusions based on subjective analogies; yet too much systematization might snip in the bud also many a correct conclusion based on subjective analogy.

The color responses were equally controversial, and, as in the case of M, we had to resort to a comparison with all other responses of the same subject, since statistical data were not yet available.

In addition to normal persons, we also tested as many mental patients as possible. Rorschach was very eager to familiarize himself with the reactions of a wide range of pathological cases whose clinical diagnoses were known. This opened up a hitherto hardly known opportunity to penetrate by way of the test into the world of the mentally ill to an amazing extent. As time went on, we 'experienced' and 'knew' how, for example, an epileptic, a schizophrenic, or a neurotic responded to the test and therefore to his surroundings, and to life in general. Conversely, with everything new that we saw we automatically imagined how certain mental patients or various personality types would react to it. I cannot think of any more impressive approach to an understanding of the behavior of mental patients than extensive and intensive testing with the Rorschach. Also, many reactions and general attitudes of normal people became more plausible as one 'felt' or recognized the type underneath and with it a certain compulsion to react just in this way and not in any other way.

In this 'Rorschach climate' we almost imperceptibly, but naturally and organically, began to interpret the protocols. As time went on, we came to know more and more about a mass of details, and it only remained for us to integrate them like a mosaic, into a picture, the picture of a live personality.

In interpreting a protocol, Rorschach liked to start from something striking that attracted his attention: from the unusual behavior of some specific factor, especially from an unusual constellation of certain scoring factors. On this he commented in a lecture on "The Application of the Form Interpretation Test in Psychoanalysis," held a few weeks before his death:

> This unusual behavior offers many opportunities for a quick and certain inference. For example, if the accurately seen forms amount to 100%, that is, if all form responses are carefully chosen, and at the same time there is a tendency to Do, it is fairly certain that this is a case of compulsion neurosis or depression. If very many whole responses, made up by combining normal D's, are present, and at the same time many M, the subject is certainly inclined to phantasy. If the experience type is extra-tensive, that is, if the color responses predominate considerably over the M responses, and if this is combined with a high percentage of accurately seen forms and a high animal percentage, the subject is surely an adaptable, skillful and alert but rather highly stereotyped worker. If the succession W, D, etc. is extremely rigid, that is, if with great regularity first a W, then a D, then several Dd's are given for every plate, the subject is certainly a skilled logician but an inflexible pedant, and so forth. Thus there are many constellations which can be readily grasped and which allow fixing the main lines of the psychogram with relative ease.

Once these main lines were fixed and understood, all other details merely served to elaborate further the width and depth of the picture.

To be in this manner initiated into the test interpretation by Rorschach was for all of us a very moving experience. Although Rorschach tended to stick to the material at hand with its empirical and statistical validity, we had the impression of seeing an artist at work who made the real person come to life from this material because of his knowledge and his empathy. I often came to think of Michelangelo and his unfinished works, where a limb or an entire figure gradually arises from the raw block. Being permitted to watch Rorschach and share this experience with him was a great gift and an enrichment for us but also a deep fate, for when he was no longer among us, there was nobody to turn to who really knew the 'Rorschach.'

After having thus been introduced by Rorschach to his work, Behn-Esch-

enburg proceeded under the guidance of his teacher to create his own new parallel set. We made hundreds of blots and selected those which satisfied both the general requirements, such as spatial distribution and rhythm, and the specific ones met by each of the original ten blots. Several such new sets were then tried out on whole series of normal and disturbed people. The final set selected was the one which gave results most closely approximating those of the original set. Rorschach wrote about this in his *Psychodiagnostics:*

> Such parallel sets are made by selecting from a large number of random blots those in which the configuration appears to correspond to that of the original blots. Next, the plates must be tried out on a large number of subjects to find out whether they are really accepted and not merely rejected as inkblots. Then only, the standardization begins. Only normal subjects, but of different levels of intelligence and education, should be used. It is the main task of standardization to see to it that the new plates are analogous to the original ones, so that the potentialities for movement, color, whole, and white space responses, respectively, are the same for corresponding plates. In other words, the new set of plates should elicit these factors neither more nor less abundantly and neither more nor less easily than the original set.

With his newly created set of parallel plates, Behn-Eschenburg for the first time tested children on a large scale. He began, as mentioned before, with an age group which seemed to promise psychological insights of particular interest. A part of the results of these tests was then summarized in a paper: *Psychological Examination of School Children with the Form Interpretation Test.* Behn-Eschenburg as well as Rorschach had counted on all sorts of variations and deviations to occur in tests with children. Specifically, they had expected that the symptomatic significance of some of the factors would undergo some modification. But this scarcely happened so that for example all symptomatic values could be taken over from previous studies practically without change. This close correspondence between the two sets of blots made, of course, the results obtained with both highly comparable.

Thus, Rorschach's long standing wish for a parallel set was fulfilled. And so also was his wish to check his own results from a partly different point of view with a new set of blots. At the same time a beginning was made for a whole series of experiments planned at that time which were designed to help shed light on general and specific problems of development, such as the description of developmental norms for different intelligence types, experience types, perceptual types, characters, etc.

Unfortunately, Hans Behn-Eschenburg, like his revered teacher, Hermann Rorschach, was taken away from his work by his all-too-early death. Not until years later were we able to publish his parallel set of test blots under the name Be-Ro-Test, newly standardized by Dr. Hans Zulliger, and provided with an introduction based on the paper mentioned above and on posthumous manuscripts.

Received October 1, 1954

Rorschach Test Correlates of Assaultive Behavior [1]

BEN C. FINNEY [2]
Veterans Administration Hospital, Palo Alto

INTRODUCTION

This study is an attempt to test against a behavioral criterion the general hypothesis that information about an individual's impulse control and his level of hostility can be obtained from an analysis of his responses to the Rorschach test. Impulse control and level of hostility can be thought of as personality characteristics which dynamically interact to yield another personality variable which may be called the *assaultive reaction potential*. It is assumed that this variable is sufficiently stable that at any given time it should be possible to arrange individuals confronted by a comparable amount of provocation along a continuum as to the probability of their exhibiting rage against other people.

The criterion used in this study was the presence or absence of attempted homicidal assaults in two comparable groups of WW II veterans in a psychiatric hospital. The use of these criterion groups involves several assumptions which should be clarified. First, it is assumed that a group of patients who have exhibited assaultive outbursts will have a higher average *assaultive reaction potential* than a group of comparable patients who have never crossed the threshold into overt violence. Of course, since there was no way of assessing the assault-provoking press of the environment, some of the assaultive behavior might be due more to the amount of external provocation than to personality differences. However, as will be explained in the section on the selection of the groups, most of the patients had been repeatedly assaultive in several situations, frequently including the same hospital environment which the non-assaultive patients managed to handle without such outbursts. It seems reasonable to assume sizeable differences in the group means in the strength of the *assaultive reaction potential*, although there is probably some overlap of the groups on this variable.

The second basic assumption is that the *assaultive reaction potential* is primarily determined by the personality variables of hostility and impulse control, and that the groups will show mean differences on both of these. In any single case the assaultive behavior might be due to deficient impulse control rather than to intense hostility, or, vice versa, a person with ordinarily adequate impulse control might be overwhelmed by an excessive amount of hostility. Nevertheless, there seems no reason to believe only one factor was predominantly effective and thus the two groups should show mean difference in both hostility and impulse control.

As these basic assumptions seem tenable, these groups provide a criterion to test the general hypotheses that the Rorschach Test can provide a measurement of impulse control and of hostility, and it also allows us to test separately the validity of the various scoring categories and indicators which have been hypothesized to be related to impulse control and hostility, as well as the relative effectiveness of clinical interpretation versus objective scoring.

---

[1] From the V. A. Hospital, Palo Alto, California. Based on a Ph.D. thesis submitted to the University of California, Berkeley, 1951.

[2] The author wishes to thank the following persons for their valuable assistance: Olga Bridgman, Richard C. Hamister, Robert E. Harris, Louis S. Levine, Quinn McNemar, Frances G. Orr, and Clare W. Thompson.

THE HYPOTHESES

Emotional Control

Rorschach (16) hypothesized that the number of color responses *(Sum C)* and the extent to which form is used with color *(FC : CF)* are important in assessing affective control. Also, he said that the greater the proportion of human movement responses to the color responses *(M : Sum C)*, the more stable the affect.

Klopfer (10) has suggested that absolutely no color responses might be indicative of a tendency to occasional emotional explosions, since complete repression of feeling responses might lead to the accumulation of affect that could be expressed only in outbursts. He has also hypothesized (9) that the ratio of human to animal movement *(M : FM)* was related to the degree of mature control over instinctive drives.

Rapaport (14) suggested that form-minus responses *(F−)* are indicative of the capacity for impulsive, unreflective action, and Beck (3) similarly believes that a high form-plus per cent *(F+%)* goes with firm ego control.

Although these hypotheses have gained general acceptance, the few attempts systematically to test their validity have produced conflicting results.

Meyer Williams (19) used a drop in performance on the Wechsler-Bellevue Digit Symbol Sub-test in an experimental stress situation as a measure of the intellectual control and emotional stability of 25 college students. He found significant correlations between this measure and *F+%* and *Form-color Integration*. However, Carlson and Lazarus (4) replicated the experiment and found no significant results, and even the trends were reversed.

Baker and Harris (1) using speech intelligibility under the stress of fear from shock as a measure of emotional control, found, on 14 subjects, insignificant results on *Form-Color Integration* and barely significant results on *F+%*.

Clark (5), generalizing from the MMPI items that discriminated between groups of college students having different proportions of *CF* and *FC*, believed that *FC* responses were correlated with good adjustment but over-caution in social standards and with indecision, while a higher *CF* is associated with lack of regard for social conventions and feelings for others, a high degree of self-confidence, and a rather immature super-ego. These results from self-descriptions would seem to support the *FC : CF* hypotheses.

Barrell (2) using staff ratings on maturity-immaturity of 120 clinical psychology graduate students, found no correlations with *FM* and *FM : M* ratio.

Storment and Finney (17) using a criterion similar to the present study found significant differences in the number of minus color responses *(FC−* and *CF−)*, but no other differences in any of the scoring categories of the Klopfer and Davidson (8) *Individual Record Blank*.

In general, to date the validation attempts on the hypotheses concerning emotional control have yielded ambiguous and conflicting results.

Hostility

The assessment of hostility using the Rorschach Test has been a rather recent development. Rapaport (14), Lindner (11), and Lubar (12) have discussed the clinical use of aggressive content to evaluate hostility.

Elizur (6) developed a reliable scoring method which yields an anxiety score and a hostility score. He found with 30 college students that there were significant correlations between the anxiety scores and indications of anxiety and dependency obtained from questionnaires, self-ratings, and judges' ratings. The hostility scores correlated with indications of hostility, submissiveness, and aloofness, derived by the same methods, and both scores were related to ideas of reference and states of depression. Both

scores were found to differentiate between 22 neurotics and matched group of normals.

Gorlow, Zimet and Fine (7) found there were significant differences on Elizur's scoring of anxiety and hostility between 13 adolescent delinquents and a matched control group.

Walker (18) found ratings of hostility based on the Rorschach content and on the MAPS Test were associated with ratings of hostility made upon forty therapy patients by the therapists. Self-ratings and scores from the Rosenzweig P-F were not related to the hostility ratings.

Storment and Finney (17) comparing 23 non-assaultive and 23 assaultive hospitalized psychiatric patients found that a rating of aggressive content significantly differentiated the groups. None of four skilled judges, using global clinical judgment, were able to sort the patients successfully.

Reitzell (15) compared groups of alcoholics, hysterics and homosexuals, scoring the records for certain aggressive concepts and hypothesizing that hysterics would show more hostile content. She failed to find significant differences which could be interpreted either as showing a lack of difference in the amount of hostility between the groups or as indicating the failure of the content to reflect real differences.

These studies in general seem to support the hypothesis that hostility will be reflected in the amount of destructive, hostile content in the Rorschach.

Clinical Ratings versus Objective Scoring

In order to test the common assumption that projective tests require an integrative, intuitive evaluation by a skilled analyst, it was hypothesized that a clinical rating of the strength of the *assaultive reaction potential* would be superior to any of the single "objective" scores hypothesized as indicators of hostility or emotional control. It was also hypothesized that a rating of emotional control based on all of the scores in the Klopfer and Davidson *Individual Record Blank* would differentiate the groups better than any one of the single scores.

Summary of the Hypotheses to the Tested

In order to test the validity of the above hypotheses, it is predicted that the Assaultive Group will exceed the Non-Assaultive Group on (1) *FC*− and *CF*−, (2) *CF*, (3) *Sum C*, (4) *CF FC*, (5) *Sum C M*, (6) *FM*, (7) *FM M*, (8) *F*− and (9) there would be fewer *FC* responses, and (10) more cases with no color responses. It is also predicted (11) that there would be more aggressive, destructive content in the protocols, that (12) a clinical rating of impulse control will discriminate better between the groups than any one of the above measures, and that (13) a clinical rating of the *assaultive reaction potential* would give better discrimination than any of the objective scores.

Procedures

The Criterion Groups

The criterion groups consisted of 78 hospitalized, psychiatric patients who had definitely exhibited violent, assaultive behavior, and a comparable group of 39 patients whose hospital records indicated that they had never been assaultive.

The Assaultive Group were located by inquiry among the hospital personnel and by systematic search of the clinical records of the patients who had been given Rorschach Tests. They included only patients for whom there was definite, clear-cut evidence from the clinical records that they had actually intended or succeeded in harming others. With the exception of cases in which there were single well-authenticated instances of dangerous assault or serious injury, only patients who had been repeatedly assaultive were included. Cases on whom the information was conflicting, ambiguous, or inadequate were

discarded, as well as those who had been only mildly assaultive, such as striking or grappling on one or two occasions or getting into occasional fights in which there had probably been mutual provocation. The patients had been given the Rorschach test within three months after the assaultive incident, with the exception of four cases in which the delay was longer, but who were included because they all had a history of repeated serious assaults.

The Non-assaultive Group was secured by selecting every other patient from the alphabetically arranged files of the patients who had been given psychological tests. This file included about half of the hospital population, and about two thirds of the newly admitted patients given psychological testing. All of the Rorschach Tests had been administered prior to this study by V. A. Clinical Psychology Interns, all of whom had had at least a one year course in Rorschach testing and whose testing procedures were supervised by a staff psychologist. As all of the testing had been done as a part of routine hospital diagnostic testing, the test administrators had not been especially concerned with the problem of aggression.

The clinical records of this group of randomly selected patients were carefully examined, and those cases in which there was any evidence of definite threats of harm or attempts to strike or hurt anyone were excluded from the Non-assaultive Group. In many of these cases the assaultive behavior was not sufficiently marked to warrant including them in the Assaultive Group so that this procedure tended to maximize the differences between the two groups. Cases in which the available information was too sketchy, such as when the hospitalization was brief and the patient was the only informant were also rejected. Approximately two thirds of the original sample were rejected for these reasons.

Several restrictions were placed on both groups. First, the Rorschach record had to include at least three main scoreable responses. Secondly, the patients could be no more than 45 years old, which meant that all were WW II veterans. Thirdly, no patient was included who had had Electric Shock within two months prior to the testing date.

The two groups were compared on age, education, Wechsler - Bellevue I.Q., occupation, diagnosed brain pathology, epilepsy, intemperate use of alcohol, or degree of psychosis; there were no significant differences. The hospital diagnoses of the two groups are listed in Table I.

TABLE I—Hospital Diagnoses

	Non-assaultive %	Assaultive %
Psychoneurotic	28	22
Chronic Alcoholic	3	2
Psychopathic Personality	5	3
Epileptic	3	6
Post-traumatic Syndome	5	3
Manic-depressive—depressed	5	0
Manic-depressive—manic	0	3
General Paresis	0	2
Involutional Melancholia	3	0
Schizophrenia—unclassified	10	18
Schizophrenia—paranoid	21	31
Schizophrenia—hebephrenic	3	3
Schizophrenia—catatonic	13	3
Schizophrenia—simple	8	1

Statistical and Scoring Procedures

All the judging and scoring was done without the knowledge of the assaultive status of the patient. The records were all carefully re-scored by the author according to Klopfer's method. The results were calculated in terms of both raw scores and percentage scores, and as the results turned out to be essentially similar, the usual Rorschach conventions were used in deciding whether to use raw or percentage scores to determine the significance of the differences. "Additionals" were given half weight in the determinant scores and full weight in the content scores. With distributions normal by inspection, the *t* technique was used, and in skewed distributions the median of the total group was

used as an arbitrary cutting point, and the significance of the number of cases above and below this point was tested by the chi-square technique. The "single tail" test of significance was used with all predicted relationships.

The Palo Alto Destructive Content Scale

In a previous study by Storment and Finney (17) using the same general approach and criterion, significant differences were found using a scoring of destructive content. This study will be called the "First Sample," the present data will be called the "Second Sample." Each response was scored by the author on a five-point scale on the basis of his subjective standards as to the amount of friendly or hostile feeling implicit in the response. When a response was assigned a score, any similar responses were assigned the same score. Further use of this scale showed that while the degree of hostility could be judged readily, the non-hostile responses were more difficult to categorize, especially the weak and passive content. Furthermore, an informal re-scoring of the original sample by the same judge showed considerable variation in the way the concepts were re-scored, suggesting lack of intra-rater reliability.

In *The Palo Alto Destructive Content Scale,* which was devised to meet some of these limitations, the content is scored according to specified principles, along with a list of examples.

The principles for scoring the content with this scale are essentially rational and *a priori* rather than empirical. They represent speculations as to the most probable standards used by the general public to determine their reactions as to the destructive nature of any given object or animal. Four sub-categories of destructive responses were differentiated. (1) *Derogatory Remarks* [3]*;* responses which have been described in a derogatory, contemptuous, or hostile manner. (2) *Victim of Destruction;* responses in which the concept (a) has been destroyed, crippled, damaged, injured, or has some essential part missing; (b) is in the process of escaping, warding off, or anticipating injury or harm; (c) anatomy responses in which the skin would have to be cut in order to view the organ; and (d) external sex organs.[4] (3) *Possibly Destructive;* responses in which the concept is (a) more likely than not to attack, injure, harm, or destroy something; (b) is usually used in some destructive manner; or (c) is considered by the subject to be frightening or dangerous. (4) *Actively Destructive;* responses which include movement (*M, FM,* and *m*) and in which the action is explicitly destructive.

In addition a series of examples, including ambiguous or difficult responses was prepared, using the pooled judgment of four clinical psychologists. Scoring rules were set up, such as that of making two destructive scores for any single response the maximum, or that responses where the subject vacillated between non-destructive and destructive content were to be scored as destructive.[5]

The Reliability of the Scale

It was found that protocols could be scored reliably with this scale. The percentage of destructive concepts assigned to an individual by each of two judges independently scoring 62 records correlated .83 and the judges agreed in 87% of the concepts as to the sub-category rated.[6]

While this procedure demonstrates

[3] This category was taken from the scale described by Elizur (6).

[4] Sex responses, although not obviously related to destructive activity, have been observed to occur frequently in threatened, hostile patients.

[5] Copies of the scale are available upon request.

[6] Since the variation in the number of responses given by different individuals introduces a spurious inflation in the correlation of raw scores, only percent scores were correlated.

that the scores can be classified consistently by judges, it does not provide a measure of the consistency with which an individual responds with a given percentage of destructive content. This aspect of reliability was evaluated by correlating the percentage scores obtained from a sample of 36 hospitalized patients who had been given both the Behn-Rorschach and the Rorschach tests by Mueller (13); this provided a type of "parallel form" estimate of reliability. The reliabilities were .71 for *Victim of Destruction*, .13 for *Possibly Destructive*, .23 for *Actively Destructive* and .63 for the *Total Scores*. There were too few responses in the *Derogatory Comments* to be analyzed.

In order to explore the inter-relationships within the sub-scales, product-moment correlations were computed on the percentage scores among the scales. These are shown in Table II, along with the point-biserial correlations with the criterion.[7]

TABLE II—Palo Alto Destructive Content Scale Criterion and Sub-scale Inter-correlations

	Victim	Possibly	Active	Sum C
Criterion	.06***	.20***	.11***	.18***
Victim	.70*	−.17	−.10	.00
Possibly		.18*	.22	.14
Active			.10*	.04
Sum C				.57**

* N = 100
** N = 46
*** N = 162 (First and Second Samples.)

It should be noted that the inter-correlations between the sub-scales are quite low, but the negative correlation of the *Possibly Destructive* scale (−.17) with the *Victim of Destruction* is significant (.05 level) and the positive correlation of this scale with the *Actively Destructive* scale (.22) is also significant (.05 level).

An attempt was made, using a multiple regression technique, to combine the *Sum C* scores and the sub-scales of the *Palo Alto Destructive Content Scale* in a single score with increased validity, but this did not increase the discrimination.

The validity of this scale was compared with the scoring procedure used in the first sample (17) by re-scoring the 46 protocols of that sample. The *t* of the difference between the Assaultive and Non-Assaultive Groups was 2.61 for the *Palo Alto Destructive Content Scale* as compared with the *t* of 4.60 obtained with the earlier scoring method on that sample. While in this sample the more objective scoring loses some validity, it is the author's opinion that in the long run the even lower reliability of that more clinical method would limit the validity.

RESULTS

Determinant Scores

Significant differences in the predicted direction were found with (1) *CF*, in which 64% of the Non-assaultive cases and 42% of the Assaultive cases were below the group median for raw *CF* scores, yielding a chi-square of 4.57 which is significant at the .05 level, and (2) *Sum C*, in which 72% of the Non-assaultive cases and 41% of the Assaultive cases were below the group median for raw *Sum C* scores, yielding a chi-square of 9.85 which is significant beyond the .01 level. None of the other predicted determinant scores or ratios showed significant differences.

The groups were also compared on all the rest of the usual determinant scores and ratios; significant chi-squares at the .02 level (two tail test) were obtained for *k* or *FK* scores, but considering the number of comparisons made, this may well be a chance result. These data are presented in Table III.

Palo Alto Destructive Content Scale

The *t* of difference between the groups for the *Total scores* was 1.64, which is just below the .05 level for a single tail test for a predicted relationship.

[7] The point-biserial correlation was used because of the statistical demands of the multiple regression technique utilized.

TABLE III—Comparison of Assaultive (A) vs. Non-assaultive (NA) Patients Determinant Scoring Categories – Raw (#) and Percentage (%) Scores

Determinants		Non-assaultive		Assaultive		*t* Test of Mean Diff. A vs. NA		Chi-square Above below Mdn. vs. A-NA	
		#	%	#	%	#	%	#	%
M	Mean	1.4	6.8	2.0	9.3	1.48	1.82		
	Sigma	1.6	6.3	2.0	7.4				
	% below Mdn.	62.	62.	44.	44.			3.35	3.35
FM	Mean	2.7	13.6	3.1	16.6	1.04	1.33		
	Sigma	2.0	9.4	2.3	12.3				
	% below Mdn.	54.	65.	48.	46.				
m	Mean		1.9		2.0		1.10		
	Sigma		1.6		2.1				
	% with 0	79.		71.					
k	% with 0	95.		74.				5.89**	
K	% with 0	77.		74.					
FK	% with 0	64.		84.				6.32**	
F	Mean	9.3	48.2	9.9	46.1				
	Sigma	6.1	21.8	6.8	22.1				
Fc	% with 0	46.		45.					
FC	Mean		2.5		2.8				
	Sigma		4.2		3.5				
	% below 0	67.		57.					
CF	Mean	1.1	5.9	1.8	8.8	1.81	1.62		
	Sigma	1.8	9.5	1.5	8.9				
	% below Mdn.	61.	61.	42.	44.			4.57*	3.35
Sum C	Mean	1.9	9.5	2.7	14.1	1.84	1.92		
	Sigma	2.0	11.4	2.2	12.4				
	% below Mdn.	72.	62.	41.	40.0			9.85***	4.87*
F—	Mean	1.9	11.2	2.1	13.1		.65		
	Sigma	2.1	13.9	2.8	15.2				
	% below Mdn.	51.		47					
FC—	% with 0		72.		81.				
F+	% below Mdn.	46	44	49	52				
FC— CF—	% with 0		65		67				
FM>M		24	61	51	69				
Sum C>M		19	49	45	58				
CF>FC		18	46	43	55				
No Color		8	21	12	15				

* Significant at .05 level. (Chi-square 3.84)
** Significant at .02 level. (Chi-square 5.41)
*** Significant at .01 level. (Chi-square 6.64)

In order to determine if a significant difference would show up if the *N* were increased, the 78 Assaultive and the 39 Non-assaultive patients from the present study were combined with the 22 Non-violent [8] and 23 Violent patients described in the earlier

[8] One case in the Non-violent group was discarded for this comparison because he had later exhibited assaultive behavior.

TABLE IV—Percentage Scores on the Palo Alto Destructive Content Scale

	N	Non assaultive		Assaultive		Diff.	t
		Mean	Sigma	Mean	Sigma		
Second Sample	117	29.10	16.54	34.69	17.55	5.59	1.64
First Sample	191	23.86	16.87	32.26	12.53	8.40	1.50
Combined Sample	91	27.21	16.84	34.13	16.62	6.92	2.56*

* Significant at the .01 level. (Single tail test)

study by Storment and Finney (17). It seems legitimate to combine these two groups, since they represent two different samples of patients drawn according to the same selection criteria from the same population, the patients at Palo Alto VA Hospital. Also, since the scoring procedures of the *Palo Alto Destructive Content Scale* were not derived by analysis of the data of the first study, but instead represent essentially *a priori* categories, including the cases from the first sample would not produce spurious results.

In this combined sample of 162 cases, the first sample (17) and the present data, termed the second sample, there were significant differences between the Assaultive and Non-assaultive groups on the *Total* scores; the *CR* was 2.20 (P .01, using a single tail test of significance). These data are presented in Table IV.

When percentage scores on the subscales were considered separately, all the differences were in the expected direction, but the *Possibly Destructive* scale was the only one which showed a significant difference with a *CR* of 2.75.

Clinical Judgments

In order to test the hypothesis that the "clinical-intuitive" analysis of the Rorschach can yield discriminations which are not brought out by the more standardized and objective procedures, the protocols were given to three experienced Rorschach interpreters with instructions to sort the cases into Assaultive and Non-assaultive groups, using any methods of their own choosing. The predictions of each judge were compared to the criterion and to each other judge, and the significance tested by chi-square. The results are presented in Table V and indicate that two of the judges scored significantly above chance but did not agree significantly with each other in their predictions.

To compare the results of the judges with the *Sum C* scores, individuals who had *Sum C* scores above the group median were considered to be Assaultive and those below were considered to be Non-Assaultive. It was found that this procedure discriminated 62% of the cases correctly, which was significant at the .02 level, and that there was no significant difference in predictive ability between the results using *Sum C* scores and those of the clinical judges.

Another comparison of the relative effectiveness of clinical judgment versus additive scoring procedures was obtained. An experienced judge was given for each patient all the data contained on the Klopfer and Davidson *Individual Record Blank* (8) and asked to rate the patients on a four point scale as to the quality of their emotional control. These ratings did not discriminate significantly between

TABLE V—Percent of Agreement between Clinical Judges, and the Criterion

	Criterion	Judge E	Judge F	No. of Cases Judged
Judge E	65*	....	....	76
Judge F	43	66	....	46
Judge G	69*	55	68	54

* Significant at the .01 level.

groups of 39 Non-assaultive and 37 Assaultive patients. The *Sum C* scores alone on these same patients discriminated significantly; the difference between the two methods, however, was not significant.

Discussion

It is interesting to note that among the several widely used indicators of emotional control, only the color scores showed significant differences. It should be noted that FC responses were more frequent in the Assaultive group; thus there was a greater tendency to give all types of color responses. Perhaps the use of hospitalized patients, who as a group are prone to defective emotional control, may have blurred the relationships by restricting the range, or perhaps some of the subtler indicators do not work with psychotic patients; nevertheless the failure to obtain significant differences suggests that some of the hypothesized indicators of emotional control may lack validity. On the other hand, the data add additional confirmation to the hypothesis that a patient's response to the colored inkblots does have a definite relationship with the quality of his emotional control.

The hypothesis that the content of the responses can be related to hostility, or at least to the *Assaultive Reaction Potential,* was substantiated, but the small amount of difference between the groups, the low correlation, and the size of the sample needed to demonstrate the significance of the difference all suggest that the relationship is not one that can be utilized with confidence in dealing with individual patients.

One main limitation of the *Palo Alto Destructive Content Scale* is the low reliability, especially in the subscales which correlated with the criterion. The one sub-scale with fair reliability, the *Victim of Destruction* scale, unfortunately did not correlate with the criterion. One might hypothesize that patients who turn their hostility inward might see concepts which are damaged or harmed. The negative correlations with the *Possibly Destructive* and *Actively Destructive* scales suggest that the tendency for an individual to give content responses in which the destruction is directed outwardly makes it less likely for him to give responses in which the destruction is happening to the subject. This would seem to be congruent with the hypothesis that an individual tends to direct his hostility *either* outwardly *or* inwardly. Thus, since assaultive behavior would be more directly related to outwardly directed hostility, one could explain the failure of the *Victim* of *Destruction* sub-scale to correlate with the *Assaultive Reaction Potential.* Elizur scores most of this type of response as anxiety responses, and this also seems a reasonable way of regarding them. Since fear of being injured, anxiety, and inwardly directed hostility would seem to be closely associated psychological processes, perhaps the *Victim* responses include projections of all of these affects.

The lower reliability of the *Possibly Destructive* responses, particularly in the light of the fact that in this sample it was the most valid subscale, is puzzling. Actually the biserial correlation with the criterion was about the same magnitude as the reliability. It is the least overt and most inferential of the sub-scales, since the concepts are not specifically described as being destructive, but they are simply concepts that in real life are usually associated with some kind of destruction. It is quite likely that in many cases the factor that determined the choice of the concept for the subject was not the destructive aspect but some other quality or association. Nevertheless, in this sample at least, the processes that determine assaultive behavior seem related to the choice of at least some of the concepts in this class.

The *Total* score has fair reliability, .63, but the sub-scales are not measur-

ing similar processes. Thus, although this study has demonstrated that destructive content is related to some degree of assaultive behavior, the problem of getting a reliable measure still remains. Elizur felt that his content scoring method approached adequate reliability (.48 and .75) but his estimates are inflated because he used raw scores rather than percentages.[9] Also, his sample of graduate students probably gave more responses than this group of hospitalized patients, thus raising the reliability.

While this procedure does not have the reliability one might desire, the results do not particularly suffer from comparison with clinical judgments. Thus, the best clinical judge, using all the data available, was not significantly better at this task than the *Palo Alto Destructive Content Scale.* Furthermore, the clinical judges did not agree among themselves; while we do not know what the intra-judge reliability would be, the inter-judge reliability is low. This was also true in the earlier sample (17) when none of the four judges agreed significantly with each other or with the criterion.

In conclusion, it would seem that if the content analysis to determine hostility is to be clinically useful, the method must be made more reliable. The most obvious method is to lengthen the test, perhaps by using more blots and setting a minimum number of responses. Only with a larger sample of the pool of potential responses can it be determined if a person's concepts are consistently and reliably related to the level of his hostility.

SUMMARY

It was hypothesized that information about an individual's impulse control and hostility could be obtained from the Rorschach Test. A criterion group of 39 Non-assaultive, and a comparable group of 80 Assaultive hospitalized psychiatric patients were compared on the following Rorschach indicators which were hypothesized to be related to emotional control, (1) *FC*− and *CF*−, (2) *CF*, (3) *Sum C*, (4) *CF*>*FC*, (5) *Sum C*>*M*, (6) *FM*, (7) *FM*>*M*, (8) *F*− and (9) there would be fewer *FC* responses. The Assaultive Group showed significantly more *Sum C* and *CF* responses; the other measures were not significantly different.

It was also hypothesized that the Assaultive group would show more destructive content. A standardized rating scale, the *Palo Alto Destructive Content Scale* was devised. Four subscales, *Derogatory Remarks, Victim of Destruction, Potential Destruction,* and *Active Destruction* correlated only slightly with each other. The scale could be scored reliably but a "parallel form" estimate of reliability was only .63, for the *Total scores.* The differences between the Assaultive and Non-assaultive groups on the *Total* scores of this scale were just below the 5% level of significance. When the results of this sample were combined with the data of an earlier study using similar criterion groups (17) there was a small but significant (.01) difference, indicating a low but positive relationship between assaultive behavior in psychiatric patients and destructive content on the Rorschach test.

Two out of three clinical judges were able to discriminate significantly between the groups, but they did not agree among each other as to the Assaultive patients. There was no demonstrable superiority of the clinical approach over the additive *Sum C* scores.

REFERENCES

1. Baker, L. M. and Harris, J. S. The validation of Rorschach Test results against laboratory behavior. *J. Clin. Psychol.,* 1949, 5, 161-164.

2. Barrell, R. P. The relationships of various types of movement responses in the Rorschach Test to personality trait ratings. *Amer. Psychol.,* 1952, 7, 358.

[9] With a variation in R, split halves from a case with a large number of responses are more likely to correlate with each other than with a half-test from a case with a low R.

3. Beck, S. J. *Rorschach's Test. Vol. II: A Variety of personality pictures.* New York: Grune & Stratton, 1944.

4. Carlson, V. R. and Lazarus, R. S. A repetition of William's experiment on stress and associated Rorschach factors. *Amer. Psychol.*, 1952, *7*, 317.

5. Clark, Jerry. Some MMPI correlates of certain color responses in the Group Rorschach Test. *Amer. Psychol.*, 1948, *3*, 349.

6. Elizur, A. Content analysis of the Rorschach with regard to anxiety and hostility. *Rorschach Res. Exch.*, 1949, *3*, 247-285.

7. Gorlow, L., Zimet, C., and Fine, H. J. The validity of anxiety and hostility Rorschach content scores among adolescents. *J. Consult. Psychol.*, 1952, *16*, 73-75.

8. Klopfer, B. and Davidson, H. *The Rorschach method of personality diagnosis; Individual Record Blank.* New York: World Book, 1942.

9. Klopfer, B. and Kelley, D. M. *The Rorschach technique.* New York: World Book, 1946.

10. Klopfer, B. *Personal communication.*

11. Lindner, R. M. Some significant Rorschach responses. *J. Clin. Psychopath.*, 1948, *9*, 146-152.

12. Lubar, G. H. Rorschach content analysis. *J. Clin. Psychopath.*, 1948, *9*, 146-152.

13. Meuller, Paul. A comparison of the Rorschach and the Behn-Rorschach Tests. Unpublished study.

14. Rapaport, C. *Diagnostic psychological testing. Vol. II.* Chicago: Year Book Publishers, 1946.

15. Reitzell, J. M. A comparative study of hysterics, homosexuals, and alcoholics using content analysis of Rorschach responses. *Rorschach Res. Exch.*, 1949, *2*, 8-15.

16. Rorschach, H. *Psychodiagnostik*, 2nd. ed. Bern: Huber, 1932.

17. Storment, C. T. and Finney, B. C. Projection and behavior; a Rorschach study of assaultive mental hospital patients. *J. Proj. Tech.*, 1953, *17*, 349-360.

18. Walker, R. A. A comparison of clinical manifestations of hostility with Rorschach and MAPS Test performances. *J. Proj. Tech.*, 1951, *15*, 444-460.

19. Williams, M. An experimental study of intellectual control under stress and associated Rorschach factors. *J. Consult. Psychol.*, 1947, *11*, 21-29.

Received May 5, 1953
Revision received August 25, 1954

Stimulus Value of the Rorschach Cards: A Composite Study[1]

C. E. GEORGE
A. & M. College of Texas

The affective value of the standard Rorschach cards has received considerable attention from investigators for some time. The hypotheses tested and the results reported are so varied that it is difficult to state definitely what conclusions may be fairly drawn at the present stage of investigation.

The purpose of this paper is to compare the findings of a number of published reports on the affective value of the Rorschach cards and to check these findings against one another as well as against a previously unpublished study by the present writer. It is hoped that this approach will help to clarify the problem to some degree.

To accomplish this purpose the cards were ranked by the present author according to their stimulus value as measured by the research paradigms described in the body of this paper. Rank-difference correlations were then computed for all the possible combinations.

The writer made a study based on the expressed preference for the cards by a sample of 60 Arizona State College students. A detailed account of this sample may be found in a separate study by Smith (9). The standard Klopfer method of individual Rorschach administration was employed, after which each S was asked to pick out his favorite card. The cards were then ranked accordingly, from the one chosen most often as the favorite to the one chosen least often (Table I, column 1).

The records of this sample, hereafter noted as the ASC sample, were then ranked according to the mean number of responses elicited per card (R/Card) (Table I, column 9).

A comparable study is that of Hershenson (4). Utilizing a sample of 30 high school students, she was able to rank the cards according to preference[2] (Table I, column 2). Hershenson reports a rho of .72 between the rankings based on her male and female groups. In order to avoid the use of small samples this study used the rank-order based on her total sample. Hershenson instructed each S to rank the cards in the order of his preference; she then averaged the rank values for each card. Although her method of determining preference is quite different from that used with the ASC sample, the results are highly correlated (Table II).

Data for the third, fourth, fifth, and sixth preference rankings were obtained from Wallen's study (10) in which a sample of 419 men from a military training station were used as S's.

Four of Wallen's seven groups will be considered here. Groups (U)[3] and (N) were, respectively, "unstable" (N=30) and "normal" (N=65) S's to whom the standard Rorschach cards were presented. Groups (Up) and (Np) were, respectively, unstable (N=41) and normal (N=95) S's to whom achromatic reproductions of the cards were presented.

The normal S's were selected at random; the unstable by psychiatric screening. As each card was presented, the S was asked whether he liked or disliked it. Wallen's data were then presented in terms of the percentage of each group liking each card (Table

[1] The author is greatly indebted to Dr. Sydney Smith of Arizona State College and Dr. Charles Barnes of the University of Arizona for many helpful suggestions.

[2] Hershenson presents her data in terms of mean ranks. The present author re-ranked the cards from one to ten, from the card having the lowest mean rank to the one having the highest, in the calculation of rho.

[3] Wallen's notations are used throughout in referring to his group.

TABLE I. Stimulus Value Rank-Orders for the Rorschach Cards as Calculated from the Data of Several Studies

Cards	1	2	3	4	5	6	7	8	9	10	11
I	8.5	8	6.5	10	10	10	8	10	3	9.5	1
II	5	6	10	8.5	8.5	8	9	7.5	7	4.5	2
III	3	4	8.5	8.5	8.5	5	7	9	4	2	3
IV	10	7	4	6	6.5	6.5	4	2	6	8	4
V	8.5	10	1	4	1	1	1	1	10	9.5	5
VI	7	9	6.5	5	6.5	2	10	7.5	8	6.5	6
VII	6	5	8.5	7	4	9	6	5	9	6.5	7
VIII	1.5	3	2	1	4	6.5	2	3.5	2	4.5	8
IX	4	1	5	3	4	4	5	3.5	5	2	9
X	1.5	2	3	2	2	3	3	6	1	2	10

TABLE II. Rank-Order Correlations Describing the Relationships Among Several Studies of the Stimulus Value of the Rorschach Cards

	1	2	3	4	5	6	7	8	9	10
1. ASC sample preference										
2. Hershenson preference	.82									
3. Wallen (U) preference	.05	.00								
4. Wallen (N) preference	.44	.42	.77							
5. Wallen (Up) preference	.25	.22	.72	.82						
6. Wallen (Np) preference	.12	−.08	.54	.59	.61					
7. Pascal *et al* Sex R's	−.17	−.22	−.79	−.69	−.79	−.34				
8. Shaw Sex R's	.15	−.02	−.70	−.65	−.76	−.39	.79			
9. R/Card productivity	.61	.63	.19	.23	−.12	−.16	.15	−.13		
10. Beck's Z complexity	.87	.87	−.15	.33	.13	.20	.00	−.14	.51	
11. Order of presentation	−.56	−.61	−.51	−.88	−.79	−.46	.61	.47	−.20	−.51

NOTE: rho of .77 or $>$; P = $<$.01
rho of .65 or $>$; P = $<$.05

I, columns 4–7). It is interesting to observe that Card V ranks highest in three of the four preceding groups, whereas it ranks ninth and tenth, respectively, in the ASC and Hershenson samples. This discrepancy accounts for the low correlations found between the military and student groups (Table II). The most probable explanation for the striking difference between the reactions of the groups to Card V is to be found in Mitchell (6): " . . . those patients liking Card V best have a significantly lower mean total IQ (102) on the Wechsler–Bellevue than the mean IQ (112) for the combined population preferring the other cards." Mitchell also reports a lower mean educational level for the S's preferring Card V than for the others.

The IQ's reported for the student samples are superior, while the randomness of the military groups suggest average intelligence. The median grade completed by Wallen's S's indicate that they had, generally, less formal schooling than had the student samples.

Next to be considered are two studies concerning the relative sexual significance (or "suggestiveness") of the cards as measured by the number of sex content responses made to each card by S's asked to produce as many such associations as possible. Pascal

et al. (7) report their findings based on a sample of 237 normal, neurotic and psychotic S's of both sexes (Table I, column 7). Comparable results are those of Shaw (8) based on a similar study with a sample of 50 college males (Table I, column 8). The high level of agreement between the findings may be seen in Table II.

The present writer computed a rho of .84 between the male and female sub-group rankings based on the Pascal data and thus considered it justifiable to deal with the rank-orders based on the whole sample, rather than those of the sexes separately.

A need was felt for a measure of relative configurational complexity for the cards in order to explore the possibility of there being such a factor of stimulus value. No such measure from purely experimental studies has come to this writer's attention. Beck (1), however, has approached the problem from the viewpoint of difficulty of producing whole (W) responses to the cards. By studying the frequency of W responses to each card he was able to assign Z values (organizational difficulty scores) to W's produced on a given card. Therefore, using Beck's Z table (p. 212), it was possible to rank the cards according to their complexity, as herein defined. This ranking does not provide as precise a distinction between cards as could be desired, but it is the only method readily available and has proven of value in this study.

The final factor included in Table II is order of presentation. Its inclusion is based on findings by Wallen: "If cards appear late in the series they are more popular than if they appear early in the series," and Levy (5): "Position in the series was found to have a significant effect on the changes in conductance for the sample investigated." Although Levy found no statistically significant difference between the mean galvanic skin response stimulated by each of the ten cards on her sample of 50 male students, the cards were ranked for the purposes of this study as accurately as possible from the data of her Figure 1.[4]

The only significant relationship between the derived rank-order and all the others studied is that with the ASC (R/Card) variable. The computed rho is .73.

All the rho's were calculated by the usual rank-difference method. Their levels of confidence were determined from the ABAC presented by DuMas (2).

Discussion

It is not necessary to consider the stimulus values of the individual cards here, as the studies previously referred to contain adequate discussions of that aspect of the problem.

Following columns 1 and 2 down the length of Table II, one can readily see how similar the preferences of the high school and college samples are, both in terms of the intercorrelation with one another and also in their correlations with the other variables. The highest relationships are those between each of these samples and the configurational complexity variable. High school and college students tend to prefer complex cards to simple ones. The observation that the military groups show no such tendency may be attributed to differences in intelligence, in the light of the previously quoted findings of Mitchell. Comparing the rho's of the student samples on the productivity (R/Card) variable, one finds that both groups also tend to prefer the cards which elicit the greater number of responses, although to a lesser extent.

The two samples under discussion were also affected by order of presentation, but not to the same degree as they were by the two variables discussed above.

---

[4] The data of Levy's study were presented in the form of a bar-diagram. This made the ranking of the cards more difficult and somewhat less exact, since interpolation was necessary.

Wallen's normal (N) and unstable (U) groups may be studied with the aid of columns 3 and 4 of Table II. The significance of the relationships between these two Wallen groups and Shaw's findings have been discussed in an earlier paper (3) and will not be repeated here. The inclusion of the Pascal study tends only to corroborate the previous report. It is sufficient to say here that the high negative relationship between the sexual significance and preference rank-orders offers support for the concept of "sex shock."

The correlations at the intersection of columns 3, 4, 5, and 6 with rows 7 and 8 seem to indicate that unstable S's reject (do not prefer) the sexually stimulating cards more strongly than do the normal S's. There is also an apparent tendency for normals to react negatively to the sexually stimulating cards to a greater degree when color is present, as in the standard Rorschach blots, than when color is not present, as in the achromatic blots.

If these observations can be confirmed in independent investigations, they may have important implications for the concepts of color dynamics, sex shock (reaction formation?), and the hypothesized relationships between intelligence and preference for complex cards.

References

1. Beck, S. J. *Rorschach's test.* New York: Grune and Stratton, 1949, Vol. 1.

2. DuMas, F. M. A table and an ABAC for testing the significance of rho. *Educ. psychol. Measmt.*, 1950, *10*, 433-436.

3. George, C. E. Some unforeseen correlates between the studies of Shaw and Wallen. *J. abnorm. soc. Psychol.*, 1953, *48*, 150.

4. Hershenson, Jeanne R. Preference of adolescents for Rorschach figures. *Child Developm.*, 1949, *20*, 101-118.

5. Levy, Jeanne R. Changes in the galvanic skin response accompanying the Rorschach test. *J. consult. Psychol.*, 1950, *14*, 128-133.

6. Mitchell, Mildred B. Preferences for Rorschach cards. *J. proj. Tech.*, 1951, *16*, 203-211.

7. Pascal, G. A., Reusch, H. A., Devine, C. A., and Suttell, B. J. A study of genital symbols on the Rorschach test: presentation of a method and results. *J. abnorm. soc. Psychol.*, 1950, *45*, 286-295.

8. Shaw, B. Sex populars in the Rorschach test. *J. abnorm. soc. Psychol.*, 1948, *43*, 466-470.

9. Smith, S. R. The Rorschach examination and general intelligence: a validation study. Unpublished Doctor's dissertation, Univ. of Calif., 1951.

10. Wallen, R. The nature of color shock. *J. abnorm. soc. Psychol.*, 1948, *43*, 346-356.

Received March 8, 1954

The Relationship Between Hostility in the TAT and Behavioral Hostility [1]

MARTIN R. GLUCK
Mental Hygiene Consultation Service
Fort Lewis, Washington

The importance of hostility in mental illness has been stressed by clinicians of all persuasions. Illustrations of this point are papers by Bergler (2) and Crider (4). The former discusses the necessity of distinguishing between "normal" and "neurotic" hostility, while the latter writer stresses the prognostic implications of the patient's hostility. It is, in many instances, the task of the clinical psychologist to use projective techniques in making such diagnostic and prognostic evaluations as Bergler and Crider discuss. Thus, one of the paramount questions which may be asked is what are the relationships between a patient's test responses (to a projective technique) and his "everyday," "acted-out," "social" behavior. The present study is an attempt to investigate a part of this question of validity. Specifically, the problem studied is the relationship between the amount of hostility expressed in Thematic Apperception Test protocols and the amount of hostility which the testees displayed in a behavioral (stress) situation.

BACKGROUND AND RELATED RESEARCH

This assumption that we can, or should, attempt to predict overt behavior from projective test responses has been either implied or made explicit by such projective workers as Piotrowski (8), Rosenzwieg (10), and Wittenborn (15). Thus, the idea is neither new nor untested. Though there have been several studies which have attacked this problem of prediction by attempting to relate the material elicited from the TAT to some behavioral criterion, the results of these studies are not uniform, and consequently, the problem still presents many questions. The first of these investigations is Morgan and Murray's original study with the TAT (7), in which the authors conclude that the material elicited by the test and by five months of psychoanalysis coincide quite closely. Similar work has been done by Saxe (12) and by Walker (14); in both of these researches material from stories (i.e. from the TAT, from the MAPS) has been found to correlate well with therapists' evaluations of their patients.

Sanford et al. (11) and Symonds (13), using such criteria as teachers' ratings, case history material, and adjustment scores from a personality inventory, both reported the lack of significant correlations between children's fantasy needs and the criteria. In fact, Sanford et al. reported that need-aggression correlated −.30 with teachers' ratings of the frequency and intensity of manifest needs as judged from the children's behavior.

Pittluck (9) reports that aggressive behavior can be predicted when anxiety provoked defense mechanisms (as reflected in the stories) are considered along with the aggressive impulses expressed in TAT stories. In a

[1] Based on a dissertation submitted to the Graduate School, University of Pittsburgh, in partial fulfillment of the requirements for the degree of Doctor of Philosophy. The author gratefully acknowledges the help and guidance of his dissertation committee and especially thanks Drs. A. David Lazovik and A. W. Bendig. He is also indebted to the members of the Psychology Section, Neuro-Psychiatric Service, Fitzsimons Army Hospital for their cooperation, and to Dr. Betty Mallinger for giving her time to rescore the TAT records. The statements and conclusions of this study are the author's and do not necessarily reflect the opinion or policy of the Army Medical Service.

somewhat similar type of study, Bialick (3) reports negative findings. He used nurses ratings of the cooperativeness of their psychiatric ward patients as the criterion measure. He found no significant relations between these ratings and the aggression expressed against an authority figure in the TAT. Bialick analyzed the data for three variables with regard to the method of expressing the aggression and its results, and also suggested an hypothesis with regard to an inverse relationship between indirect hostility and ratings of cooperativeness. As is indicated above, none of the hypothesized relations were found to hold true.

Problem and Definitions

Because of the divergence of both findings and criteria used in previous studies, it appeared worthwhile to explore some hypotheses about simpler relationships which *might* exist between projective test responses and overt behavior. Therefore, three hypotheses were set up. They are:

(1) The more overt hostility a subject expresses in his projective records, the more he will react with hostile behavior when placed in a situation which is provocative of such behavior.

(2) The more covert hostility a subject expresses in his projective records, the less he will react with hostile behavior when placed in a situation which is provocative of such behavior.

(3) Subjects who have a large amount of hostility of both kinds in their records will react with more hostile behavior than subjects whose total amount of hostility (in their records) is relatively less.

Admittedly, this is a narrower approach than that of some of the previous studies. In many respects, it goes against the warnings and direct instructions of projective workers, in that it does not take account of the "whole" personality, but is in a sense an "atomistic" approach. However, the results summarized above seemed to indicate that such an approach might well prove useful, if only to clarify the presence or absence of such "simple" relationships.

The term "behavior" is used here in the restricted sense of gross actions or activities which are observable by other individuals without their needing to use any special instruments, e.g., psychometric tests, to observe the subject. "Hostility" is used in a very broad sense. It is meant to connote both feelings and behaviors which might in any fashion carry the ideas of the following words: anger, hatred, resentment, exasperation and irritation.

Methodology

Although a total of 51 subjects were run through all of the procedures outlined below, only 30 were used in the final analysis of the TAT protocols. All subjects were patients on the Neuropsychiatric Service of Fitzsimons Army Hospital. Each patient used as a subject was given part of the psychological battery by a technician and then was later seen by one of the psychology interns who administered the TAT and any other techniques he felt were necessary to the individual case. The TAT was administered by a set of written instructions and the subjects wrote out their own stories. Six of the TAT cards were used. Five of these were chosen by a group of eight experts as the cards most likely to pull aggressive themes; the sixth card (No. 1) was used as an introductory one. The pictures used, in the order of presentation to the subjects, were: 1, 11, 10, 8GF, 13MF and 18GF.

Following the completion of the psychological testing, the subjects were put through the Behavior Battery. This was a stress situation specifically designed to be as frustrating as was judged safe (for the patients), and consequently as hostility provoking as possible. A basic part of the stressfulness was the examiner who took the role of a hostile, domineering authority figure. He offered the subjects no sympathy and purposely vio-

lated all the rules of handling patients and establishing rapport with them. The subjects' reactions to each of the various tasks which made up the Behavior Battery were rated at the conclusion of the task by each of three raters.

THE TAT HOSTILITY RATING SCALES

Starting with Aron's classification of aggressive themes (1) as a guide, the author set up two scales, Overt hostility and Covert hostility, for the TAT content. By the former is meant expressions which are rather open in their meaning, appear to have undergone little transformation from feeling to expression, and which might be thought of as being close to the "surface" in terms of being readily expressed. By "covert" is meant rather repressed, inhibited, or disguised expressions of underlying feelings of hostility. These require interpretation by the clinician before he can assign to them the meaning he feels is appropriate. The feeling or tension is symbolized, or at least is not given direct expression, in the projective productions of the subject.

The point values of the scales ranged from 0 to 3, 0 being no hostility expressed in the story. No account was taken of the kinds of defenses reflected by the story or by the "hero's" actions, the level of behavior or the target of the hostility. Examples from the protocols themselves were incorporated into the definitions of the points on each of the scales.

The author then rated the protocols selected for the final analysis, giving each subject's protocol an Overt, Covert, and Total (Overt + Covert) Score. The records and the scales were then given to another rater with only a minimum of directions. The reliability coefficients obtained between the two sets of ratings is presented in Table I.

In order to take advantage of the higher reliability it would afford, the two sets of independent ratings were combined for each of the three scores.

TABLE I—Reliabilities of the TAT Scales (N = 30)

	Overt	Covert	Total
Independent Ratings	.86	.67	.88
Combined Ratings*	.92	.80	.94

* The two independent scores assigned to each record were summed and this sum of the two ratings was used (for each scale) as the projective hostility score. This summing of the scores permitted the reliabilities of these combined scores to be computed from the Spearman-Brown formula (6, p. 390).

The corrected reliabilities thus resulting when the Spearman-Brown correction was applied also appear in Table I. Inspection of this table shows that the combined ratings are quite reliable. A further check was done by running inter-correlations between the Overt and Covert scores. The correlation coefficient between the Overt and Covert scores was .04. From this it was concluded that the scales were in fact independent measures and were tapping some types of qualitative differences in the protocols.

If a story could have received two different ratings on the same scale, it was always given only the higher of the two. If a story warranted ratings on both scales (i.e., Overt and Covert), it was given each of the ratings. The hostility score for each of the TAT scales was obtained by summing the ratings given to each of the five stories and dividing by the number of stories (five). This was done to equalize to some extent the differences of the cards in their ability to "pull" aggressive themes. These ratio scores were the ones used in the calculations of the reliabilities discussed above. As is there mentioned, the final TAT Hostility Scores are the sum of the two ratios (one from each rater) for each subject.

RESULTS AND DISCUSSION

The Behavior Rating Scale

The scale in its final form was a product of the raters themselves. In a pilot study to investigate the feasibility of the project, the future raters

were asked to rate the behavior of a few subjects on a scale ranging from 0 – "no observable hostility" to 6 – "most hostility observable." No other points were defined. After this first rating session, the raters and the author attempted to define what, and how, they had rated. The finished scale resulted from several more ratings and discussions of the points on the scale, and of concrete examples fitted to each point.

Checks on interjudge reliability, discrimination between subjects and intercorrelations between tasks were computed on the basis of the 51 subjects in the total sample, even though not all of these subjects appeared in the final analysis of the data. An analysis of variance and another check on interjudge reliability were also calculated; these statistics demonstrated that the judges were well able to discriminate differences in hostility and were reliable in these discriminations and judgments. Next, a factor analysis was computed on the intercorrelations among the nine tasks in the Behavior Battery and based upon its results the final criterion score was established. This score, for each subject, was the average of the average ratings of three factorially pure tasks.

Relationships Between Projected Hostility Scores and Criterion

The results of the final analysis are presented in Table II.

It is immediately obvious that none of the measures of projective hostility are significantly related, either positively or negatively, to the measure of behavioral hostility. None of our three hypotheses is supported by the data presented.

TABLE II—Correlations of the Projective Hostility Scores With the Criterion (Hostility Score Derived from Ratings of Subjects in the Behavior Battery) (N = 30)

Criterion Score with Overt Score	=	−.09
Criterion Score with Covert Score	=	.18
Criterion Score with Total Score	=	−.02

A number of considerations seem pertinent to these results and to the methods employed in arriving at them. First, we do not believe as Bialick (3) has proposed that relationships, especially positive ones, between fantasy and behavior cannot be expected where the subjects studied are psychiatric patients. On the contrary, we believe that these are the kinds of subjects who might well be expected to exhibit a direct correlation between their fantasy and their behavior. This seems logical when one considers that some of the primary problems of the psychiatric patient are his inability to control his impulses and his difficulties in making adequate discriminations between fantasy and reality – between that which society approves and that which it disapproves.

Second, a comparison of research methods of past studies with this one seems pertinent. With the exception of Pittluck's (9) study, those workers who have reported significant relations between fantasy and expressed hostility have all used therapy material, in one form or another, as their criteria. We would expect the kind of material produced in therapy, and therapists' interpretation of such material, to be much like the materials and interpretations arising in fantasy productions. Both situations are relatively free from society's conventions and restrictions about expressing taboo material, and also the mechanics of symbolic interpretation used in both may often be quite similar. Thus, it seems clear enough that all these past studies have involved a criterion which is in sharp contrast to that used in this study.

Much of the stress of the Behavior Battery derived from the role which the Behavior Battery examiner took in the situation. His demeanor quite thoroughly conveyed the attitudes and actions of a strong, dominating, and hostile authority person. It is suggested, then, that one factor which oper-

ated to suppress behavior manifestations of the subjects' hostility was their reaction to this strong authority figure. This tentative explanation would be in line with Bialick's (3) finding that there was no relationship between fantasied aggression toward an authority figure and overt behavior toward a comparable real authority figure. Again we may suggest that the presence of the authority person acts on many subjects as some kind of inhibiting agent. This argument is afforded further support by experiences with some of the patients who were subjects in this project. Several who were only moderately hostile in the stress situation had histories of violent aggressive ward behavior when *not* in the company of nurses or doctors. Another subject, a non-commissioned officer, was known to be quite hostile in his behavior toward his subordinates, but he too was only moderately hostile in the stress situation. When the criterion situation is thus examined, there appears to be a plausible interpretation of our results, which is in keeping with, and not necessarily contradictory to, previous findings.

Two other ideas put forth by different writers also appear to bear on our findings. Feshbach (5), Sanford (11), and Symonds (13) all make the suggestion that there is a negative correlation between certain fantasies and behavior; that is, if a need or tension is expressed in fantasy, then the individual will not be forced to secure behavioral gratification or relief, and likewise the converse is also suggested. We hypothesized something akin to this idea in our hypothesis relating "covert" hostility inversely to behavior. The resulting non-significant correlations do seem to negate this kind of interpretation of our results. The last relevant suggestion noted in the literature is that of Saxe (12). He remarked that projective tests and therapy material may often disagree because they are working at different levels of behavior. We think that such a statement is more appropriate to the question at hand, i.e., a comparison of behavior and fantasy. It may well be that fantasy and behavior are quite different (i.e., only distantly related) aspects of a functioning personality. Our own biases at present incline us to be more concerned with such tenative answers (about the results of this study) as the effects of anxiety and the effect of the presence of the authority figure, than to accept completely this assumption stated by Saxe and other writers.

CONCLUSIONS

From the data presented in the preceding section it is necessary to conclude that none of our hypothesized relations between the amounts of projected and behavioral hostility hold. In view of previous research findings on similar problems, we feel that our primary conclusion might better be stated thus: The *amount* of hostility which a patient displays in his TAT record is, by itself, not a reliable index as to whether stress will provoke him to hostile (overt) behavior. It is suggested that in addition to the amount of hostility which a protocol reflects, such other factors as its direction and the amount of anxiety it (the hostility) provokes, and the degree of control apparent in the record, will have to be considered before adequate prediction of (overt) behavior can be successfully attempted.

With regard to methodology, we believe that this study has demonstrated that it is readily possible to design an experimental situation which will provoke hostility, and, that using a scale similar to that used in this research, it is possible to obtain quite reliable judgments of the intensity of expression of the hostility (or of any other type of behavior which the investigator wishes to study). Further, it has been demonstrated that it is feasible to construct reliable scales with which to rate content variables in the TAT. Such scales would appear to have at least "face validity" with regard to the

manner in which the rated variable is usually handled in the clinic situation. By saying that the scales have "face validity" we are referring to the idea that the various points on the scales, the examples used to define these points, and the general definitions of the scales do not appear to do violence to the concepts they are evaluating. That is, the scales embodied, to a large degree, many of the frames of reference within which the concepts being studied are normally viewed by the clinician.

Summary

1. Three hypotheses relating fantasied hostility to behavioral hostility were proposed.

2. Subjects were first tested on five selected TAT cards and then subjected to a stress situation intended to provoke them to hostile behavior. During this stress situation their behavior was rated for the amount of hostility expressed.

3. Rating scales for the TAT were built and demonstrated to be quite reliable.

4. The ratings of the hostility in the TAT content were not found to be significantly correlated with a criterion score derived from the ratings of the subjects' behavior in the stress situation.

5. Possible contributing factors to the non-significant correlations obtained were discussed.

6. It was concluded that our hypotheses were not supported. It was further concluded that the methodology of this study offers a practical approach to the isolation and study of various types of emotional behavior and personality variables.

References

1. Aron, Betty. *A Manual for Analysis of the Thematic Apperception Test.* Berkeley, California: Willis E. Berg, 1949.

2. Bergler, Edmund. Differential diagnosis between "normal" and "neurotic" aggression. *Quart. rev. Psychiat. Neurol.* 1946, *1*, 1-5.

3. Bialick, Irving. The relationship between reactions to authority figures on the TAT and overt behavior in an authority situation by hospital patients. Unpublished doctoral dissertation. University of Pittsburgh, 1951.

4. Crider, Blake. The hostility pattern. *J. clin. Psychol.* 1946, *2*, 267-273.

5. Feshback, Seymour. The drive reducing function of fantasy behavior. *Amer. Psychologist.* 1951, *6*, 315. (Abstract)

6. Garrett, Henry E. *Statistics in Psychology and Education.* 3rd ed., New York: Longmans, Green and Co., 1947.

7. Morgan, Christiana D. and Murray, Henry A. A method for investigating fantasies. The Thematic Apperception Test. *Arch. Neurol. Psychiat.* 1935, *34*, 289-306.

8. Piotrowski, Zygmunt A. A new evaluation of the Thematic Apperception Test. *Psychoanal. Rev.* 1950, *37*, 101-127.

9. Pittluck, Patricia. The relation between aggressive fantasy and overt behavior. Unpublished doctoral dissertation, Yale University, 1950. (Mimeographed abstract)

10. Rosenzweig, Saul. Levels of behavior in psychodiagnosis with special references to the Picture-Frustration Study. *Amer. J. Orthopsychiat.* 1950, *20*, 63-72.

11. Sanford, R. Nevitt, et al. Physique, personality and scholarship. *Monog. Soc. Res. Child Dev.* 1943, *8* .

12. Saxe, Carl H. A quantitative comparison of psychodiagnostic formulations from TAT and therapeutic contacts. *J. consult. Psychol.* 1950, *14*, 116-127.

13. Symonds, Percival M. *Adolescent Fantasy.* New York: Columbia University Press, 1949.

14. Walker, R. G. A comparison of clinical manifestations of hostility with Rorschach and MAPS test performances. *J. proj. Techs.* 1951, *15* 444-460.

15. Wittenborn, J. R. The implications of certain assumptions involved in the use of the TAT. *J. consult. Psychol.* 1950, *14*, 216-225.

Received January 18, 1954
Revision received June 15, 1954

A Note on the Use of the Word Association Test as an Aid to Interpreting the Bender-Gestalt

RICHARD S. GREENBAUM
Dade County Child Guidance Clinic, Miami, Florida

The Bender-Gestalt has long been considered a standard diagnostic instrument for use with children. A general pattern of projective interpretation has been established by Hutt (2, 3) and Bender (1), and their principles of test interpretation have proved extremely useful clinically. As a uniform application of these principles is yet to be demonstrated, in clinical practice only an assumption of their validity can be made. Even when this is done, the problem remains of relating dynamics as expressed on the test to the behavior of the child. This problem is considerably simplified when the meaning of the design to the child is known by the examiner. A preliminary study of the basic stimulus properties of the designs was made by Sucek and Klopfer (4). Their focus was on the properties of the Gestalt figures themselves, rather than upon the meaning of the figures to the individual taking the test. Their results suggested that the figures may have different meanings for each individual taking the test.

Hutt feels that the interpretation should be based on the factors which are influential in determining the reproduction. These factors, he feels, are a resultant of the biological factors, temporal factors, (i.e., length of exposure time to the figures) and the motivation of the subject. Motivation he defines as the integrated influences of the relations between the examiner and the subject, the conscious set of the subject, and the unconscious need of the subject. It is really the last two aspects of what he defines as the motivational factor, conscious set and unconscious need as they affect perception, which the examiner is attempting to ascertain when he tries to determine the meaning of the figure to the subject.

In the past, the meaning of the figure to the subject was clinically ascertained in two ways. The first way was to give the subject a card and ask him to free associate to the figure. Hutt also recommended that the card be given a second time with instructions to the subject to draw the figure any way he wished, that is, to modify or change it in any way. This provided a contrast between a rigidly structured and an unstructured situation, and sometimes gave clues as to the meaning the stimulus figures had for the subject. It also gave evidence of his initial perceptions to the degree such perception influenced the modification of the figures when the subject was freely allowed to change them. Although from time to time, the difference between the productions in the structured and unstructured versions of the Gestalt stand out with a unique significance for an individual, this does not occur too commonly, and the meaning of the changes is often not clear to the examiner.

Potential variation in the meaning of any symbol among children is such that a general interpretation, even within a limited culture, of the meaning of any symbol to a child, appears to be a hazardous clinical procedure. Yet, in general, and especially in clinical testing, it is important to know the meaning of a symbol to a child. In dealing specifically with the Bender, it appears most important to know this when there is some discrepancy between a specific figure and a child's reproduction. To increase the certainty of the interpretation of this change, the following procedure has been used with a fair degree of success with children during the latency and early adolescent periods.

Following standard administration of the Bender-Gestalt, the child is given the cards one at a time and asked what they remind him of. These associations are noted, and on his following visit a word association list is given to him, in this case the Rapaport-Gill-Shafer list. Inserted in this list are the associated words given by the subject to the Bender-Gestalt designs. The list contains sixty words and it has been found most feasible to insert the Bender-associations between the fifteenth and fortieth words on the association list. Sometimes the responses given to these words do not serve particularly to clarify the picture. In those cases the response words given to the word associated to the design are then inserted by the examiner between the fortieth and sixtieth words on the Rapaport list. Generally, a specific association to the figure is obtained which is meaningful in terms of the case.

An example may serve to clarify this procedure. In Case X, a ten-year-old boy, Figure II was rotated counter-clockwise about twenty degrees. Initial association given by the subject to the stimulus word for Figure II was "cot." This word was inserted on the Rapaport-Gill-Shafer list, which subject was given as part of a routine word-association test, and he gave the word "bed" as his response to "cot." "Bed" was then inserted between the fortieth and sixtieth words and the association "sleep" was given. The case history revealed that up to the age of seven the subject was forced to take fifteen hours a day bed-rest, and at the present time considerable difficulty is still focussed around his mother's insistence that he get nine hours of rest daily. Although his mother's insistence upon this point is indicative of some deeper dynamics in the case, this provided a clue to the focus of the problem in the mind of the subject: aggression because of his enforced rest.

Figure V was rotated about twenty degrees clockwise. The rest of the figures were drawn either without rotation or with counter-clockwise movement. Instead of the dots presented on the stimulus card, loops were drawn by the subject. On the rest of the cards where dots were present on the stimulus cards, subject copied the dots. Subject's association to this figure was a "tank." On the word association list, "tank" was associated with "gun." This would suggest that an expression of aggression (tank-gun) leads to some depression (the clockwise rotation as interpreted by Hutt) and some regression (loops instead of dots on just this one figure).

Examination of the subject by other devices revealed development of what appeared to be an early conversion syndrome. It was possible tentatively to hypothesize that development of this syndrome was related to some intrapunitive feelings which occurred concomitantly with the depression that accompanied the subject's feelings of aggression, and that his aggression was based primarily on his struggle against his mother's over-control which she expressed by attempting to keep him infantile. Thus, two clear foci of the problem and hypotheses of the dynamics to be more thoroughly investigated were secured from the information available on the Bender.

It is one of the goals of projective techniques to get the maximum of information in a minimum period of time. The above technique is suggested with this in mind. The total time for everything except the interpretation is only about thirty minutes. For any individual within the age group noted above, about a third of the associations turn out to be as fruitful as the two examples given. Another third appear to give clues not quite as clearly delineated and the remaining third are either non-associated or completely useless. In the cases of children under the age of seven, this technique has not proved useful at all. Subjects below that age have a strong tendency to give word associations that rhyme or that are

not real words, and interpretation of these appears to be extremely difficult. The examiner has not tried this technique with children above the age of fourteen or with adults.

In general, this technique appears to be more revealing than simply asking the subject what the designs or association words mean to him. Although simply asking the subject may be included as a technique for finding the meaning of specific symbolization to a child, the author finds word-association more pertinent and lucid for establishing such meanings. It is suggested that this technique may be used to clarify the meaning that other symbols have for children as they appear in other projective techniques. Specifically, this technique has proved quite helpful in dealing with the children's Rorschach where the meaning of certain responses was unclear.

REFERENCES

1. Bender, Lauretta. A visual motor gestalt test and its clinical use. Research Monograph, 1938, No. 3, American Orthopsychiatric Association.

2. Hutt, M. L. The use of projective methods in personality measuring in Army medical installations. *J. clin. Psychol.*, 1945, *1*, 134-140.

3. Hutt, M. L. *Bender-Gestalt Test.* In A. Weider (ed.), Principles of medical psychology, Vol. II. New York: Ronald Press, 1953, pp. 660-688.

4. Sucek, F. and Klopfer, W. G. Interpretation of the Bender-Gestalt Test: The associative value of the figures. *Amer. J. Orthopsychiat.*, 1952, *22*, 62-65.

Received December 22, 1953

Revision received August 30, 1954

Reflections of the Acculturation Process in the Rorschach Test [1]

BERT KAPLAN
University of Kansas

There is much interest in the thesis that acculturation processes are accompanied by personality changes. A. Irving Hallowell (2) has given an interesting demonstration that such changes may occur where a culture is itself changing as a result of contact with another culture. He found that a group of Salteaux Indians which had had extensive contact with our white civilization showed certain differences on a Rorschach test from another group which had little white contact.[2] We are interested in the somewhat different acculturation situation in which an individual, rather than a whole culture, has had continued and intimate contact with another culture. This paper will consider the possibility that this type of acculturation may also be accompanied by changes in the Rorschach performance.

The answer to this question may have a good deal of theoretical interest. Present day culture and personality theory appears to rely on the Freudian belief that personality is developed and formed in the earlier years of life, and that of the cultural institutions affecting personality, the child rearing ones are the most significant. Indeed, on the basis of most current writings, one is led to believe that they are the only ones of significance. It seems strange to the writer that anthropologists who are known for the thoroughness with which they describe every aspect of a culture, who have in their science sophisticated concepts concerning the unity of a culture and the functional interrelatedness of its institutions, should so emphasize the effect of a single institution to the neglect of all others. In essence what we are asking in this study is whether cultural institutions other than those of child rearing can affect personality. Also, are personality patterns immediately laid down in the first few years of life, or are they susceptible to changes due to changing cultural circumstances?

In the course of a recent study in which 116 Rorschachs from young men in four cultures in New Mexico were obtained, the writer had an opportunity to bring some empirical data to bear on this question. Two of the cultures, the Navaho and Zuni, were Indian and had maintained their cultural integrity to a high degree. The two other cultures, the Mormon and Spanish-American, may be regarded in varying degrees as sub-cultures of our own society. In each of the four groups, half of the individuals were veterans and the other half were not. There is good reason for us to assume that in the Navaho and Zuni groups the veterans have had a great deal more contact with our culture than their non-veteran brothers, and that this contact was of an intense nature since the Indian soldier or sailor was ordinarily required to adjust himself to and adopt the practices of the alien culture for an extended period.[3] We thus have a situation in

[1] This research was assisted by funds made available by the Laboratory of Social Relations at Harvard University. I am additionally indebted to Dr. Clyde Kluckhorn of Harvard University for his generous support and guidance. Dr. John Adair and Dr. Evon Vogt of Harvard University gave invaluable assistance during the field work phase of the project.

[2] Hallowell, 1942 finds that Lakeside, (acculturated) Saulteaux Indians had a faster response time and were more outgoing than the Inland Saulteaux (less acculturated).

[3] Precise data on the length of service is lacking for the Zuni, Spanish-Americans and Mormons. The Navaho veterans had an average of 28 months of service. There is no reason to believe that veterans in

which personality data in the form of Rorschach tests are available for young men in four cultures, some of whom have had intensive contact with our culture and others have not.

The 116 individuals tested were young men between the ages of eighteen and forty. Fifty-two were Zuni, twenty were Mormons, twenty were Spanish-Americans, and twenty-four were Navahos. These numbers are relatively small and consequently a large amount of veteran-non-veteran variability is required if the .05 significance level is to be reached. The administration of the tests has been described elsewhere. (Kaplan, 4). A brief discussion of the sampling, however, may be relevant. The Navaho group includes all of the veterans in the group known as the Ramah Navaho, plus a matched group of non-veterans consisting almost entirely of the male siblings of the veterans. The Mormon sample is composed of all the men between the ages of nineteen and forty in the Mormon community of Ramah. The nature of the Zuni and Spanish-American samples is not so well known. Subjects in both of these groups were secured through a great many independent channels. With one exception the sample does not appear to be biased. The exception we must note is the probability that these individuals who took the test were *somewhat* more interested in communications with outsiders than those who did not. Except for a few individuals, however, the subjects did not volunteer but were chosen by the investigator.

Of primary importance, however, is the possibility that the veterans constitute a selected part of the population and might be expected to have different characteristics from the non-veterans, even if they had not been in the service. We cannot entirely rule out this possibility since our knowledge of the causes for deferment is incomplete. On the basis of an interview with the head of the Zuni Draft Board we are able to say that physical disabilities, large numbers of dependents, and religious participation were the main reasons for deferment.

Among the Mormons physical disabilities and large numbers of dependents were the reasons in almost every case, while among the Navaho the fact that some individuals could speak English and others could not was the main differentiation between veterans and non-veterans. Since those who spoke English had gone to school while those who didn't speak English for the most part had not, the acculturation resulting from the service experience served to reinforce earlier acculturation processes of a similar nature to those we are interested in. We may assume, therefore, that this kind of selectivity does not invalidate our experiment. This difference also required the use of interpreters in administering the test to most of the Navaho non-veterans, while half of the veterans took the test in English. The effect of administering the test through an interpreter has not been systematically investigated, but it is my opinion that it is not very great. Tests in the other three groups were all given in English.

Since the discussion of the question introduced in this paper was only incidental to a larger study, the analysis of the Rorschach data here is somewhat incomplete. Scores on eight major Rorschach variables: W, F%, A%, M, R, FC, CF, and T/R are compared for veterans and non-veterans in the four groups, by means of the analysis of variance technique. We shall attempt to isolate the relative weights of three types of variance among the scores. The first is the variance among the cultures, the second is the variance between veterans and non-veterans, and the third is the residual variance among individuals not

the other groups saw less service. On the contrary, it is likely that their averages were higher since several of the Navaho saw very limited duty because of language difficulties which were not present in the other groups.

attributable to the other two. The first type of variance is the subject of another paper (Kaplan, 4) and will not be discussed here. An F test of significance will enable us to say whether the difference between the veteran-non veteran variance and the individual variance could have occurred by chance alone.

There are two questions which are of crucial importance for the interpretation of the results of this study. One concerns the nature of the shift in cultural influences which has taken place for the veterans, and the other involves the nature of the psychological processes which are reflected in the Rorschach test. It is important that we decide at the outset whether there actually was a significant cultural reorientation among the veterans. Adair and Vogt (1) have described in detail cultural changes found in Navaho and Zuni veterans. They find these changes to be considerable and in many ways to challenge the central traditions in the culture. For some veterans, of course, the war experience may have been a relatively superficial one, especially those who knew little English and spent only a short time in the service. But most of the veterans were separated from friends and forced to adjust in some way to an alien culture. The Spanish-Americans and Mormons were already well acquainted with our culture and service experience should not bring such a radical cultural reorientation as with the Navaho and Zuni. Logically one might predict, therefore, that whatever personality differences occurred between veterans and non-veterans would either not be found among the Mormons and Spanish-Americans, or would be found in a lesser degree. If we order the four cultures in terms of closeness to our own culture we would find the Navaho furthest from it, Zuni next, then Spanish-American, and finally Mormon. If our hypothesis that intensive contact with another culture is accompanied by personality change were strictly true and the conditions of this research better controlled, we might expect to find the size of the veteran-non veteran differences occurring in this order.

Another serious difficulty exists, however. Rorschach test performances may be influenced by many factors in the immediate test situation other than personality. It seems possible that the effects of acculturation may be felt in these areas. For this reason a basic ambiguity of interpretation will undoubtedly continue to exist no matter what technique of personality study is used. The Rorschach test is one of the most appropriate of the techniques since the situation which the Rorschach presents to the subject is such a new and unstructured one that there are no clear culturally given rules as to how to respond properly. Under these circumstances the subject's responses are most likely to reflect his own characteristics rather than cultural rules and orientations. It is our misfortune that this is not one hundred per cent the case. There will therefore be a second source of ambiguity in our findings. We present these data not as crucial to the settling of the questions we have raised, but as throwing some interesting light on them.

Results

In the eight variables studied, the veteran-non veteran variance reached the .05 level of significance in two cases, M and FC (See Table II). The variances on three other variables, R and CF and T/R, approached the .05 level closely, while for W%, A%, and F% there were no consistent differences between veterans and non-veterans. We may conclude, therefore, that the acculturation process has effected changes which are reflected in the Rorschach test. These changes were in the number of movement responses and in the number of form-color responses. Since the CF or color form variable also shows changes which approach significance, we may

TABLE I—Mean Scores of Veterans and Non-Veterans in Four Cultures With Respect to Eight Rorschach Variables

	NAVAHO		ZUNI		MORMON		SPANISH-AMERICANS	
	Veterans	Non-Veterans	Veterans	Non-Veterans	Veterans	Non-Veterans	Veterans	Non-Veterans
W%	32%	28%	31%	28%	21%	21%	27%	31%
R	28	19	25	23	34	25	23	18
A%	50	55	61	55	52	59	57	70
F%	39%	33%	40%	48%	40%	45%	51%	46%
M	2.6	.76	2.5	1.7	2.6	2	1.3	.7
FC	3.0	1.4	3.0	.7	3.6	3.0	2.7	.9
CF	2.6	1.8	1.2	.9	1.8	.8	.9	.9
T/R	91	113	63	79	42	54	63	56

TABLE II—F Ratios for Eight Rorschach Variables in Which Military Status Variance Has Been Compared to Individual Variance

Rorschach Variable	*F Ratio*	
W%	.02	
R	1.65	
A%	.13	
F%	.19	
M	4.0*	significant at .05 level
FC	10.1*	significant at .01 level
CF	1.93	
T/R	1.45	

* Significant F's are starred

perhaps say simply that both movement and color responses are increased to a significant degree in the veteran group. As may be seen from Table I, this difference occurred in each of the four cultures. It is of interest that the changes occurred in what are perhaps the most important of all Rorschach variables. The M response is supposedly indicative of the inner creative impulse, the imaginative self expression, while the color response represents the outward going tendency, the drive to express oneself in social relationships, the interest in the world around the self. Increased self expression, both of inner imaginings and of the drive for social relations, seems to be the result of contact with our culture.

Before developing this conclusion further, however, it might be well to consider one very strong objection to it. We have noted that "R", the number of responses given, has also increased for veterans, in each of the four cultures. While this difference could very possibly have been due to chance, and conclusions about the population are not warranted, the fact is that in the sample we studied, the veterans gave an average of six responses more than non-veterans. Could the difference in movement and color responses have resulted automatically from the differences in total number of responses, and could the differences between the veterans and non-veterans be merely one of productivity? This argument is further bolstered by the fact that the variables such as A% and F%, in which the scores were cast in the form of percentages, did not show differences.

Our answer is that the differences may well be attributed to a difference in productivity. But productivity in this case is a rather undifferentiated term which masks certain specific kinds of productivity which it is important that we know about. We feel that it is a mistake to say that an increase of M and FC is really nothing but an increase in R. We would rather say that the increase in R is a resultant of the increase in movement and color responses. In this case the two increased together, in other cases they might not. An example of the latter case is seen in the comparison of the Navaho and Mormon groups, where we find in Table I that the Navaho have an average of 22.8 R while the Mormon mean R is 30.2. The Navaho have fewer M, an equal number of FM, fewer m, more K, fewer FK, fewer Fc, more FC′, fewer

FC, and more CF. Clearly in this case the larger number of R found in the Mormon group did not automatically lead to higher average scores in the other determinants. The fact is that for three of the nine variables the Navaho had higher average scores despite having smaller averages in total R.

Discussion

In the concluding section of this paper we shall discuss the significance of these results. First, we expected that the Mormons and to a lesser degree the Spanish-Americans would not show changes to the same degree as the Indian groups because they are already a part of our culture and the service experience would be a less drastic acculturation experience for them. This prediction was not correct. Both the Mormon and Spanish-American veterans showed changes in almost every variable which were as great or almost as great as those shown by the Navaho and Zuni veterans. This fact suggests that either differences in movement and color responses do not stem from basic acculturation or that the Mormon and Spanish-American sub-cultures are essentially different cultures from ours and that young men leaving for the armed services were in a position analogous to that of the Navaho and Zuni. The latter alternative does not seem likely in the case of the Mormons. Another possibility is that the experience of an individual in moving from a relatively circumscribed pattern of life to one in which there is great diversity and change, prepares him to be more spontaneous and expressive in situations such as the Rorschach test which involve relationships with outsiders.

Whatever the explanation however, these results make it impossible for us to conclude that the Rorschach differences were a result of acculturation processes. The latter may have been the cause of some or all of the differences, but the fact that differences occurred even where acculturation processes did not exist or were weaker, rules out any categorical statement of conclusions.

The Rorschach differences are facts however, and as such must be explained. Three interpretations seem possible. The first is that the Rorschach test cognitively presented a different situation for the veterans than for the non-veterans. The former had many analogous if not similar experiences and perhaps were not so surprised and confused about the nature of the test. To the latter who had no previous experience which prepared them for the test, the situation probably contained many more unknowns and was for this reason more threatening. This could undoubtedly result in inhibition and control of expressiveness and our results might therefore be explained, not by personality changes which took place in the veterans, but by differences in the cognitive orientation to the particular situation of the two groups.

A second explanation attributes the veteran-non-veteran differences not to an altered situation but to altered attitudes. While the two may be closely related at times, it is useful to distinguish one from the other. By attitudes we mean generalized predispositions which hold for a wide variety of situations and in fact frequently determine the way situations are perceived. Our second explanation suggests that the change in veterans which was reflected in the Rorschach test took place at the attitudinal level. If this is correct, their expressiveness increased not only in the Rorschach situation but in all of their life situations. There is some evidence that this is correct. Our experience in the field suggested that a Navaho veteran characterized by relatively spontaneous self expression and expansiveness in situations involving white men would have much the same quality in relation to his fellow Navahos. On the other hand, Navahos who seemed inhibited to us were also known by other

Navahos as restrained and controlled.

The third explanation of the results lies in the possibility that stable personality trends have been altered. The main reason for holding this view is that many Rorschach workers assert that the movement and color responses represent the most basic aspects of personality and are least subject to situational factors. Rorschach (8) himself wrote of the stability of these responses. Since there is no doubt whatsoever that the Rorschach performance does express personality, it seems reasonable to suppose that differences in the most profound of its variables do reflect differences in personality. Yet some doubt must remain. Recent Rorschach research by a number of different workers (Hutt, Gibby, Milton, and Pottharst, 3; Kimble, 5; Levine, Grassi, and Gerson, 6; Luchins, 7) has led us to revise our views of the stability of the Rorschach variables. These researchers have demonstrated quite conclusively that relatively superficial factors such as instructions, sex of the examiner, education, I.Q. score, hypnotically induced moods, and many others influence scores. Both the movement and color responses have been shown to be sensitive to such factors.

The problem is one of whether we are willing to believe that Rorschach scores may have been influenced by a variety of factors, which were inherent in the situation as a result of the service experience without the mediation of personality changes. In view of the evidence we have cited, it seems clear that we should be willing to accept such a possibility, perhaps even its probability. We must therefore reject the conclusion that our results reflect personality differences between veteran and non-veterans, even though we admit this as a possibility.

It seems to the writer that the most likely explanation lies at the attitudinal level. The veteran having had a wide variety of new experiences and perhaps the feeling of having dealt with them successfully, is bound to approach new situations more freely, with greater confidence and enthusiasm. This attitude is undoubtedly a generalized one. The veteran will show more initiative, independence, and will be much more free in his self expression. There is good reason to believe that these attitudes are the result of all education, and what the veterans of all four cultures have experienced more than anything else is education in the ways of a different and perhaps broader culture.

REFERENCES

1. Adair, John and Vogt, Evon. Navaho and Zuni veterans: a study of contrasting modes of culture change. *American Anthropologist*, 1949 n.s., *51*, no. 4 pp. 547-61.

2. Hallowell, A. Irving. Acculturation processes and personality changes as indicated by the Rorschach technique. *Rorschach Research Exchange*, 1942, *6*, *pp.* 42-50.

3. Hutt, M. L., Gibby, R., Milton, O. and Pottharst, K. The effect of varied experimental "sets" upon Rorschach test performance. *Journal of Projective Techniques*, 1950, *2*, pp. 181-86.

4. Kaplan, Bert. A study of Rorschach responses in four cultures. Paper of the Peabody Museum of American Archaeology and Ethnology, Harvard University, 1954, *42*, No. 2, pp. 1-43.

5. Kimble, George A. Social influence on Rorschach records. *Journal of Abnormal and Social Psychology*, 1945, *40*, pp. 89-93.

6. Levine, K., Grassi, J. R. and Gerson, H. Hypnotically induced mood changes on the verbal and graphic Rorschach. *Rorschach Research Exchange*, 1943, *7*, pp. 130-44.

7. Luchins, A. A. Situational and attitudinal influences on Rorschach responses. *American Journal of Psychiatry*, 1947, *103*, pp. 780-84.

8. Rorschach, Herman. Psychodiagnostics. Bern: Verlag Hans Huber, distributed by Grune & Stratton, New York, 1942.

Received January 18, 1954

Thematic Apperception Test: A Note on Reliability and Situational Validity[1]

GARDNER LINDZEY AND PETER S. HERMAN
Harvard University

This paper presents the results of several inquiries designed to explore consistency of measurement with the Thematic Apperception Test and the sensitivity of this instrument to psychological changes induced by a frustration experience.

Internal Consistency

Investigators using the TAT generally have not considered internal consistency an appropriate criterion to apply to this instrument. Their reasoning is that because of the known differences between cards in their power to evoke certain kinds of material, it is not reasonable to expect that taking alternate cards, or dividing the protocols in any other way, will produce equivalent scores. That is, each set of cards must be expected to show marked differences in the extent to which stories they evoke will display material of a given significance or content.

The fallacy in this argument is the assumption that when we examine internal reliability we are looking for consistency in the frequency of occurrence of particular material or events. Actually, what we hope to find is a consistent *ordering* of subjects for the two sets of protocols. Whether the average frequency is exactly the same is of little importance; indeed we might observe a perfect correlation with striking differences in the means of the two distributions.

This conventional lack of interest in split-half reliability is all the more surprising as it is quite customary in many investigations to cumulate scores from stories told to the various cards and assign an overall score to each subject based upon this total. Obviously if this operation is carried out the investigator is assuming that all of these scores have the same significance and consequently it is reasonable to assume that they co-vary to the extent that sub-scores will be highly correlated. Thus, even if we grant that certain kinds of story-events occur only very rarely in connection with certain cards while they occur very frequently in connection with other cards, we must still insist that when evidence *is* encountered, either in connection with a rare or frequent card, it should have the same significance.

Procedure. In the present study we had scores for six variables derived from stories told in a group setting to cards 1, 2, 4, 5, 10, 13MF, 14, 15 by 148 college males and females. The group was divided into 74 pairs of men and women matched in terms of approximate age, religion and socio-economic status. The variables had been selected because of an interest in sex differences (3) and consisted of: achievement, aggression, sex, abasement, nurturance, and narcism. Each story was rated on a five-point rating scale for each of the variables.

For purposes of our comparison we combined the scores for the stories told to cards 1, 4, 10 and 14 for each variable. Similarly, we secured a total for each variable based upon stories told to cards 2, 5, 13MF and 15. We then correlated these two sets of scores, using a product-moment correlation.

Results. It was clear initially that one should not expect internal consistency in this set of measures comparable to that routinely observable

[1] From the Harvard Psychological Clinic. This research was facilitated by the Laboratory of Social Relations, Harvard University.

in objective tests where, in the process of construction, this property is carefully built into the test. However, even adopting minimum expectations, the reliabilities summarized in the first column of Table I are distressingly low. At least for this method of scoring our measures seem to be deficient in internal consistency.

TABLE I—TAT Split-Half Reliability with Eight Cards

	r (n = 148)	r^*
n Achievement	.19	.54
n Aggression	.29	.67
n Sex	.15	.80
n Abasement	.28	.66
n Nurturance	.12	.41
Narcism	.20	.56

*Corrected by Spearman-Brown formula.

There are a number of conditions that must be considered in connection with this dreary table of coefficients. First, it is clear that these findings apply only to one particular method of quantifying test protocols – story rating. It is quite possible that further investigation will show that approaches using some other unit of analysis, e.g., act, sentence, word, etc., will reveal more internal consistency. Second, there is the extent to which the scoring technique itself is lacking in reliability and thus a source of error variance that would lessen internal consistency coefficients. In Table II we summarize the reliability coefficients for these six variables. Although these r's compare favorably with the inter-rater reliabilities reported by other investigators, it is clear that there is still a very large proportion of variance left unaccounted for (column 2, Table II) even by correlations of these magnitudes. Third, we must remember that we have reduced the length of the test by 80% and thus, we may assume, have markedly reduced split-half reliability. In the second column of Table I the same internal consistency coefficients are presented when optimistically corrected by the Spearman-Brown formula.

TABLE II—TAT Inter-Rater Reliability

	r (n = 20)	Amount of variance accounted for
n Achievement	.82	67%
n Aggression	.87	76%
n Sex	.89	79%
n Abasement	.55	30%
n Nurturance	.72	52%
Narcism	.74	55%

In summary, although our indices of internal consistency are quite low, this finding seems to point more clearly to the need for further investigation in this area than to any generally pessimistic conclusion concerning the measurement properties of this test.

Repeat Reliability

Another aspect of TAT reliability that has been little explored is consistency of measurement over a period of time—repeat reliability. To our knowledge, only Tomkins (7) has reported such a study and unfortunately he does not give sufficient details to make it possible to evaluate his results.

There are a number of reasons for this relative lack of investigative interest. Stability of measurement over time here is a somewhat mixed blessing as many investigators assume that, given any appreciable period of time, changes take place in the individual that should influence test response. Thus, although the test is customarily used to get at enduring characteristics, it is also assumed to vary with temporary states or motives. Further, it is clear that the time and effort involved in collecting the data for repeat reliability studies is not commensurate with the lowliness of this empirical goal among most clinicians. Finally, there are certain procedural problems posed by the contribution of memory to the stories told on the second administration of the test that

make this an awkward empirical problem.

Procedure. As a by-product of an earlier study (1) we had available a set of twenty protocols made up of stories told to four TAT cards (3, 8BM, 16, 20). In addition, we had a second set of protocols for the same subjects and cards that had been collected two months following the first administration. The TAT's were all administered individually by the same examiner under standard conditions except that when the test was re-administered, the subjects were urged to make no effort to recall their first story but, if that story came to mind, simply to put it aside and tell the next story that occurred to them. This restriction seemed necessary as pilot studies had shown that subjects consistently were able to remember their stories even after a lapse of months. We reasoned that if they repeated the same story, our measure would obviously reflect memory rather than test reliability. However, by eliminating this one story we still left a theoretically unlimited number of possibilities for the story to be told on the second administration of the test.

The subjects were undergraduate students who had volunteered to participate in an extensive personality study. Ten subjects were high in minority group prejudice and ten were very low.

The protocols were scored in terms of the purposes of the next study to be described. Eight of the variables were selected following Murray (6) and included n affiliation, n autonomy, n abasement, n cognizance, n recognition and n counteractive achievement, p dominance and p recognition. In addition, the stories were analyzed in terms of acts of the hero assisting others, acts of others assisting the hero, achievement of goals, failure to achieve goals, tension-relief words, story outcomes (happy-unhappy) and food words (instrumental and goal). The needs and press were scored on a five-point rating scale for each story while other variables represented simply a count of the number of appropriate acts or words in the four stories.

The association between the first and second administrations of the test was estimated by performing tetrachoric correlations for each of the variables.

Results. The outcome of our comparison of scores on the two administrations of the test is summarized in the first column of Table III. Although the tetrachoric correlation co-

TABLE III—TAT Repeat Reliability After Two-Month Interval

	r_t	S_{r_t}	r	S_r	r*
	(n = 20)				
n Abasement	.32	.42	.37	.19	.75
n Affiliation	.00	.44	.31	.20	.69
n Autonomy	.49	.55	....	....	....
n Cognizance	.49	.46	....	....	....
n Counteractive Achievement	.67	.46	....	....	....
n Recognition	.94	.50	....	....	....
p Dominance	.45	.72	....	....	....
p Rejection	.66	.47	....	....	....
Hero Assists Others	.50	.17	.25	.21	.63
Hero Assisted by Others	.67	.46	.45	.18	.80
Story Outcomes	.50	.36	....	....	....
Achievement of Goals	.07	.47	—.05	.22	—.21
Failure to Achieve Goals	.86	.51	.79	.08	.95
Tension-Relief Words	.82	.36	.67	.12	.91
Food Words (goal)	.60	.61	....	....	....
Food Words (instrumental)	.28	.42	....	....	....
Total Food Words	.30	.35	....	....	....

*Corrected by Spearman-Brown formula.

efficients are relatively substantial, one should note the consistently high standard errors. In addition, many of the variables had such a restricted range of scores that it was not possible to make any very accurate estimate of how closely the two sets of scores were related. After inspection of scattergrams we performed product-moment correlations for all those variables where there was sufficient range of scores to make this feasible. The results of this analysis are summarized in the third column of Table III. In general, the product-moment correlations resemble the tetrachoric coefficients except that the standard errors are much lower. In column five of Table III we see the rather optimistic estimates of the reliability coefficients we might expect given the same conditions and the use of the full set of TAT cards.

Considering the probable variation introduced by changes taking place in the subjects during the two-month interval, in addition to the variance contributed by imperfect rater-reliability, the consistency observed is relatively satisfactory. Actually, the higher correlations compare quite favorably with many inter-rater reliabilities reported for this test. In general, then, although our study is only a crude first step, the results are encouraging.

Situational Validity

The Thematic Apperception Test is not ordinarily used to assess temporary or fleeting personal characteristics. Nevertheless, it is reassuring to find that the test is demonstrably sensitive to situational or temporary fluctuations, for this increases the plausibility of our expectation that the test is sensitive to similar enduring characteristics. Actually, the relation between the TAT on the one hand and temporary and enduring subject characteristics on the other is very complex (2) and deserving of much more extended consideration than we can give it here. A number of investigators have assumed continuity between these two sets of motives. We avoid this assumption here and simply use the term situational validity to refer to the extent to which the test behaves in a predictable fashion following induced or temporary changes in the story teller.

Procedure. For our present analysis we used the TAT protocols described in the previous study in addition to protocols from an experimental group collected under comparable conditions except that the second administration of the test took place immediately following a severe social frustration. This frustration experience has been described in detail elsewhere (4) and here we simply indicate the major elements of the frustration:

1. Absence of food for over 10 hours in addition to the possible need to urinate and various minor annoyances such as puncturing the finger for a blood sample.
2. Exposure to a long tedious task in a tense atmosphere with little or no opportunity for tension reduction.
3. Failure to achieve the absolute goal of completing a task presumably related to intelligence.
4. Failure to do as well as the other members of the group.
5. Loss of a five dollar reward for self.
6. Prevention of other subjects' receiving their reward.

We selected a set of dimensions that seemed to us psychologically related to the experiences undergone during the frustration situation. For most of these we predicted the direction in which we expected the variable to change following frustration but for a few of the variables there did not seem any reasonable basis for directional predictions. The predicted variables were: n autonomy, n abasement, n affiliation, n cognizance, n recognition, p dominance and p rejection, in addition to hero assisting others, tension-relief words, and food words (instrumental and goal). The

variables for which we made no prediction were: achievement of goals, failure to achieve goals, story outcomes (happy-unhappy), n counteractive achievement and hero assisted by others.

For each variable a set of difference scores were computed that represented the difference in protocol scores before and after frustration. Then, from this difference a score representing the difference between the first and second administration of the test for the matched control group was subtracted. This led to a final set of scores that represented the change on the variable following frustration corrected for the equivalent change observed in the control group. For each variable this distribution of scores was tested using a *t* test to determine whether the mean of the distribution was significantly different from zero.

Results. As the results summarized in Table IV indicate, our predictions were in general confirmed. We predicted the direction of change correctly for all but one of these variables and four of the variables (food words, n abasement, n autonomy, and acts of the hero assisting others) showed sufficient change to reach significance at the 5% level. Only for n recognition did the direction of the change reverse our prediction. The findings outlined in Table V indicate that for those variables where we were unable to generate a directional prediction the relation to the frustration situation appeared to be much more tenuous. Only for the incidence of failure to achieve goals was there any indication of a possible relationship to the experimental treatment. In addition to the results summarized here, we were able to show in an earlier study (1) that there was a significant increase in outwardly directed aggression in the experimental group following frustration.

Although the conditions of the two studies are sufficiently different to make direct comparisons difficult, it is worth noting that our findings do not support McClelland's (5) contention that *instrumental* food words are most sensitive to changes in the hunger state. In our study all classes of food words showed an approximately equal

TABLE IV—Predicted TAT Changes Following Frustration

Variables	Mean Change	$S_{\bar{x}}$	*t*	p
n Abasement	1.50	.54	2.80	<.01
n Affiliation	.95	.82	1.12	<.10
n Autonomy	.75	.38	1.20	<.05
n Cognizance	.20	.35	.58	<.50
n Recognition	−.70*	.43	−1.64	
p Dominance	.45	.34	1.33	<.10
p Rejection	.60	.60	.99	<.20
Hero Assists Others	−1.30	.48	−2.71	<.01
Tension-Relief Words	1.80	1.87	.91	<.20
Food Words (goal)	.75	1.38	2.00	<.05
Food Words (instrumental)	2.25	1.56	1.44	<.10
Total Food Words	3.05	.70	4.35	<.01

*For all variables except n recognition the *direction* of the change was correctly predicted.

TABLE V—Unpredicted TAT Changes Following Frustration

Variables	Mean Change	$S_{\bar{x}}$	*t*	p
Achievement of Goals	−.70	.98	.72	<.50
Failure to Achieve Goals	−2.25	1.37	1.64	<.10
Story Outcomes (happy-unhappy)	.45	.61	.744	<.50
n Counteractive Achievement	.40	.54	.75	<.50
Hero Assisted by Others	−.05	.54	.09	>.50

amount of increase following deprivation.

It seems to us that the TAT behaved in a predictable and psychologically meaningful manner under the conditions of this study. The crudity of our psychological analysis of the frustration situation, in addition to the inevitable shortcomings in our method of analyzing story protocols, makes it quite impressive that the instrument should have fared so well as it did. However, it is worth repeated emphasis that although knowledge that temporarily instigated states are reflected in TAT protocols is interesting and in part reassuring, it leaves completely unanswered the more fundamental question of the extent to which the instrument is similarly, or differentially, or perhaps not at all, sensitive to enduring dispositions of the story teller. This remains one of the major conceptual and empirical problems facing the individual who would use the TAT with confidence.

SUMMARY

We have reported the results of three studies designed to provide evidence concerning the reliability and situational validity of the Thematic Apperception Test. The first study examined the internal consistency of scores for six variables based upon stories told to eight cards for a group of 148 subjects. Split-half coefficients were secured by correlating for each variable two sets of scores, each based upon stories told to half of the pictures. The resulting coefficients were all positive and for the most part significant but very low in absolute magnitude. Consideration of a number of mitigating factors including the reduction in the usual length of the test made clear that these results could not be considered strongly negative but rather pointed to the importance of further investigation. The second study inquired into the temporal stability of TAT scores. In this case 20 subjects told stories to four TAT cards and repeated this performance under the same conditions after an interval of approximately two months. A total of 17 different scores representing various psychological variables were examined to see how consistent they were over the two-month period. In general, the correlations were significantly positive and surprisingly high considering the factors that might be expected to interfere with complete consistency. In a third study we examined the effects upon TAT story construction of a severe social frustration experience. These effects were estimated by contrasting the differences for 20 subjects between protocols before and after the frustration experience with the equivalent differences for a control group that did not undergo frustration. We predicted the direction of change for 12 variables and for 11 of these variables the direction of our prediction was confirmed. Five of these changes were significant at the 5% level of significance. For additional variables we did not make predictions and these showed little evidence of any association with the frustration experience. Our impression was that the changes produced in TAT performance through the induction of temporary or situational states in the subjects were psychologically meaningful and provided evidence for the sensitivity of the instrument to such psychological variation.

These three studies taken together represent a very crude attempt to ask some of the same kinds of questions of the Thematic Apperception Test that are conventionally asked of objective or structured psychological tests. Although we would freely grant that such inquiries pose many difficult problems of interpretation, and further that they may *not* occupy such a crucial role in projective testing as they do with more traditional psychometric instruments, it does seem to us that answers to such questions will prove necessary eventually for a full understanding of the clinical function of these instruments. In view of this,

even very fragmentary findings, if they offer any possibility of cumulating with the results of other studies, are highly desirable and to be encouraged.

References

1. Lindzey, G. An experimental examination of the scapegoat theory of prejudice. *J. abnorm. soc. Psychol.*, 1951, *15*, 296-309.

2. Lindzey, G. Thematic Apperception Test: Interpretive assumptions and related empirical evidence. *Psychol. Bull.*, 1952, *49*, 1-25.

3. Lindzey, G. and Goldberg, M. Motivational differences between male and female as measured by the Thematic Apperception Test. *J. Pers.*, 1953, *22*, 101-117.

4. Lindzey, G. and Riecken, H. W. Evaluation of a technique for inducing frustration in adult subjects. *J. consult. Psychol.*, 1951, *15*, 18-23.

5. McClelland, D. C. The projective expression of needs: I. The effect of different intensities of the hunger drive on perception. *J. Psychol.*, 1948, *25*, 205-222.

6. Murray, H. A. *Explorations in personality*. New York: Oxford Press, 1938.

7. Tomkins, S. S. *The Thematic Apperception Test*. New York: Grune & Stratton, 1947.

Received March 7, 1954

The Relative Difficulty of the Rorschach Cards [1]

BERNARD MEER, PH.D. [2]
University of Chicago

Despite the collection of much data on the Rorschach test, no systematic analysis of the stimulus properties of the individual blots has been carried out. This has resulted in the practice of treating the ten blots as equivalent. Thus Rorschach workers still report their findings in terms of the total number of "Whole" (*W*) responses, "Movement" (*M*) responses, etc., with a seeming oversight of the fact that a *W* response on one card may mean something entirely different from a *W* on another card (4).

The present study is an investigation of one factor that appears to vary significantly from one Rorschach card to the next, independent of the individual responder. This factor is the relative *ease* or *difficulty* of the cards. By *ease* or *difficulty* we refer to those characteristics in each card which tend to facilitate or impede associations. We suggest that the measure of ease or difficulty will be reflected by three variables: (a) the reaction time for the first response, (b) the form-level of the first response, and (c) a subjective judgment of how easy or difficult it is to respond to each card.

Reaction Time

Interest in reaction time was first expressed by Rorschach, who felt that a long delay in responding to chromatic cards was a sign of "color shock" (6). There is some evidence to support this hypothesis (24) and, in current clinical practice, reaction time is used chiefly as an indicator of "color" and "shading shock" (6, 16)[3]. More recently, however, Rorschach workers have taken cognizance of the fact that the ten cards are not of equal difficulty and that one should expect differences in reaction time to various cards (3, 6, 8, 12, 16, 20, 26, 27). Thus Rapaport states, "Any evaluation of the reaction times of a subject must take into account not only his own difficulties in offering responses, but also the varying degrees of difficulty presented by the different cards" (27, p. 29). Sanderson (30) has made the useful suggestion of developing norms for the reaction times to each card and states that only then will we be able to determine whether a subject's delay in responding to any of the Rorschach cards is significant.

The present study is not so much concerned with developing reaction time norms for each card as it is in determining the relative difficulty of the cards and in showing how this difficulty is reflected in reaction time. A theoretical basis for the relationship between the difficulty of a task and the delay in responding to it is found in Lewin's theory of conflicting forces (18, 19), and in Cartwright's elaboration of this theory (10, 11).

The Rorschach test, for our purposes, can be theoretically viewed as a conflict situation. Asking a subject to find something in the blot induces a quasi-need. The latter creates a certain amount of tension, the reduction of which occurs only when the subject gives a response. The opposing force which provokes the conflict is the subject's need to adhere to the

---

[1] A major part of this paper was presented at the Amer. Psychol. Ass. meetings, Cleveland, 1953.

[2] The author wishes to express his appreciation to Dr. Harold Basowitz and Dr. Donald W. Fiske for reading and criticizing the manuscript. The author, however, assumes sole responsibility for the interpretation of the material presented.

[3] A number of studies have recently been carried out which cast some doubt on the validity of reaction time as an indicator of "color" and "shading shock" (3, 12, 17, 23, 26, 31, 35).

reality of the situation.[4] In responding, therefore, the subject selects the association which, according to his standards, fulfills the demands of the situation. This, in turn, closes the gap and reduces the tension set up by the instructions.

This theory permits several possible explanations for the variations in reaction time:

1. The situation may provoke more tension than the subject can tolerate, and he will respond quickly (usually not realistically) in an effort to reduce the tension. This will show, in Frenkel-Brunswick's terms "an intolerance for ambiguity" (13).

2. On the other hand, the tension may be so overwhelming that the subject's associative processes are entirely blocked. This will lead to a long delay or even to a rejection of the stimulus.

3. An association may be anxiety provoking or unsuitable to express to the examiner. The conscious screening of this association may block further images and also cause a delay in reaction time.

4. A subject may have very high standards for accuracy and would be unwilling to respond until he selected an image that had near perfect congruence with this stimulus. This, too, would delay the reaction time.

5. Finally, the stimulus properties of the cards may be so diffuse that associations are not readily suggested. Here again, delay in responding would occur.

It should be pointed out that the first four explanations depend primarily on the individual subject, while the fifth places more emphasis on the stimulus.

Every clinician has observed tremendous individual differences in reaction time to the Rorschach cards, and, as was suggested above, these differences occur for a variety of reasons. However, if it can be shown that the rank order of the cards, with respect to reaction time, remains relatively constant when comparing one normal group with another and then comparing these groups with other clinical groups, it can then be assumed that this consistency indicates that certain of the Rorschach cards lend themselves more readily to an association than do other cards. This is what we hope to show.

Hypothesis 1: that the difference in reaction times to the ten Rorschach cards will be significantly greater than could be expected by chance; and

Hypothesis 2: that the rank order of the cards with respect to reaction time will remain relatively constant when the results of a number of studies including normal and clinical groups are compared.

Form-Level

While it has been suggested in the literature that reaction time to the Rorschach cards is partially a function of the difficulty of the cards, the observation that form-level[5] of the first response is also dependent on the difficulty of the cards has generally been overlooked. In the present study, we hope to show that in a normal population the first response to certain of the Rorschach cards will have a consistently higher form-level than the first response to some of the other cards, and that the cards which elicit the higher form-level will be the cards which have a short reaction time. If these two variables are significantly

[4] This need is culturally determined. It is enforced on each individual from infancy onward. A subject who is unresponsive to the environmental demands for reality or who subordinates this need to more egocentric drives is considered a deviant in our society. Cartwright and Festinger (11) refer to a "restraining force" which is brought about by a "need to make a correct choice."

[5] Form-level is defined as the adequacy with which a subject deals with the stimulus material. Adequacy is determined by the goodness of fit of the form of the response to the stimulus responded to, as judged by a panel of three raters. The inability to give a response, a reject, is considered an inadequate handling of the stimulus material and is assigned a low form level score (see rating scale below).

and positively related, it will be interpreted that both variables reflect the difficulty of the Rorschach cards.

Hypothesis 3: that the differences in the form-level for the first response to each of the ten Rorschach cards will be significantly greater than could be expected by chance; and

Hypothesis 4: that there will be a significant and positive correlation between the form-level of the first response to the ten Rorschach cards and the reaction time to these cards.

The form-level for the present experiment was scored on the basis of a rating scale made up of eight categories, ranging from autistic to well integrated responses.[6] This scale was found preferable to Beck's (5) tables of F+ and F— responses because it permits every experience with the Rorschach cards, including rejects, to be placed on one continuum, and because it makes finer discriminations in the judgment of response adequacy than does Beck's scoring system. The reliability of the scale has been established in a previous study (22). Below is a brief description of the eight categories.[7]

Category A. Autistic Responses
Category B. Rejects
Category C. Card Description
Category D. Sensory Responses. In addition to the usual sensory response, this category includes traditional Rorschach form responses which are so vague as to actually be formless, e.g., a general "map" response.
Category E. Sensory Form Responses
Category F. Fair Form. This category includes those responses which show a fair amount of agreement between the response and the stimulus. Form is here used in a general way and refers not only to "form" responses in the traditional Rorschach sense but also to those responses that involve form dominantly plus the sensory aspects of the blots.

Category G. Popular and Near Popular Responses. This category was reserved for those responses which are dependent primarily on the demand characteristics of the blot.

Category H. Well Integrated Form Responses. This category includes responses which show not only good congruence with the stimulus but reveals a uniqueness which goes beyond the common popular response.

Subjective Judgment of Difficulty

Our third method for measuring the relative difficulty of the Rorschach cards was obtained by asking each subject to rank-order the cards with respect to their ease or difficulty of interpretation. It was felt that such a measure would test, in a direct way, our general hypothesis that the ten cards are not of equal difficulty.

Hypothesis 5: that the differences in the judgment of difficulty of the ten Rorschach cards will be significantly greater than could be expected by chance;

Hypothesis 6: that there will be a significant and positive correlation between the judgment of ease or difficulty of interpreting the ten Rorschach cards and the reaction time to these cards; and

Hypothesis 7: that there will be a significant and positive correlation between the judgment of ease or difficulty of interpreting the ten Rorschach cards and the form-level for the first response to these cards.

METHOD

The Rorschach test was administered individually to 50 male undergraduates at the University of Pennsylvania. The average age of the group was 21 years. All of the subjects were tested by the writer. At the outset of the experiment, it was felt that the order in which the ten cards are seen might affect the reaction time to the

[6] The author wishes to express his appreciation to Dr. Morris I. Stein and Dr. Albert J. Caron for acting as judges in rating the form-level of the responses.

[7] A more complete description of these categories can be found elsewhere (33).

cards. To control this factor, a systematic arrangement of a 10 x 10 Latin Square design was used. The subjects were randomly divided into ten groups, five in each group. The first group saw the cards in the standard order, Card I first and Card X last. The second group saw Card II first and Card I last. The third group saw Card III first and Card II last, etc. Thus each card was seen with equal frequency in each of the ten positions. The sequence of the cards, however, was unchanged; e.g., Card V always followed Card IV except when Card V was seen first.

Precautions were taken to prevent the subjects from knowing that their responses were being timed. This was carried out by facing the subject away from the experimenter and concealing the stopwatch which was used to record reaction time.[8] The procedure for administering the Rorschach followed that given by Klopfer and Kelley (16), except that only the *first* response was recorded. However, the subjects were allowed to give more than one response. At the end of the administration, each subject was told the following: "I want you to rank-order the ten cards for ease or difficulty of interpreting them." If further questions were asked about the instructions, the subjects were told, "Simply tell me in which cards it was easy to find a response and in which cards it was difficult to find a response." All the subjects ranked the cards on this dimension. Following this, the subjects were asked to rank-order the cards on the basis of personal preference, i.e., from most liked to least liked. The results of these data are referred to later in the paper. Finally, the subjects were asked to select two of the ten cards, one representing a "Father" card and one a "Mother" card. The results on the latter data have been published elsewhere (21).

Results

Reaction Time

Table I shows the effects of cards on reaction time. The method of analysis of variance with ranked data[9] was used as the test of significance. The chi-squares for cards are 36.0 and 26.2, both significant at the .01 level of confidence. These findings support our first hypothesis which stated that the reaction times to the Rorschach cards would vary significantly.

The design of the present experiment permitted us to test the effects of two additional variables on reaction time. They are subjects and card-order. No predictions were made for these variables. Table I shows the results of these variables in addition to the card variable. It can be seen that inter-individual differences have a significant effect on reaction time. This finding simply confirms a fact that is widely accepted. The influence of card-order on reaction time, while not significant, shows a trend, particularly when cards are held constant. It was found that reaction time tends to increase from the first to the last position, independent of the particular card seen. This trend might be worth further exploration.

To test our second hypothesis, a survey of the literature was made of studies giving the reaction times to the Rorschach cards for normal subjects (7, 12, 14, 23, 30, 34) and for clinical groups (3, 20, 34). The re-

[8] Reaction time in the Rorschach test is generally defined as the time interval between the presentation of the ink-blot and the first scorable response. In the present study, the definition of reaction time was broadened to include reactions to cards that did not lead to a scorable response, i.e., rejects. Rejects were interpreted as reflecting difficulty with a card. The use of the median permitted us to place the rejects at the end of the distribution of reaction times for each card. Actually, the number of rejects was insignificant. Only six rejects were given out of a possible 500, and no one card was rejected more than once.

[9] This statistical test was used rather than the usual analysis of variance technique because the data did not meet Bartlett's test of homogeneity (25).

TABLE I — The Effect of Cards, Subjects, and Order on Reaction Time

Condition	Chi-square	p
Cards (holding subjects constant and varying order)	36.0	<.01
Cards (holding order constant and varying subjects)	26.2	<.01
Subjects (holding cards constant and varying order)	30.0	<.01
Subjects (holding order constant and varying cards)	22.0	<.01
Order (holding cards constant and varying subjects)	13.8	<.20
Order (holding subjects constant and varying cards)	10.0	>.30

TABLE II — The Significance of Reaction Times to the Rorschach Cards Transformed into Ranks, for Twelve Normal and Clinical Groups*

Investigator	Type of Population	N	Rorschach Cards I	II	III	IV	V	VI	VII	VIII	IX	X
Meer	Normals	50	3	4	2	6	1	9	7	5	10	8
Sanderson	Normals	50	1	5	2	6	3	9	8	4	10	7
Beck	Normals	157	2	5	3.5	7	1	9	6	3.5	10	8
Gardner	Normals	100	1	7	4	5	2	8	9	3	10	6
Uehling	Normals	50	2	4	5	6	1	7	10	3	8	9
Dubrovner	Normals	30	6	1	4	7	3	9	8	2	10	5
Meyer	Normals	30	2	8	1	6	3	10	5	4	9	7
Baughman	Neurotics	20	2	3.5	5	8	1	7	10	3.5	9	6
Matarrazzo	Neurotics	100	8	3	4	6	1	7	10	2	9	5
Uehling	Prisoners	50	2	5	6	3	4	8	10	1	9	7
Matarrazzo	Psychotics	74	5	3	1	6	2	8	7	4	10	9
Matarrazzo	Organics	27	1	2	6	5	4	9	10	3	8	7

$X^2 = 93.0$ $p = <.001$

* Where the published data presented both the mean and median reaction times, the latter was used for the transformation into ranks. The raw data of two studies (3, 23) were available to the author. The rankings for these studies, in addition to the author's, represent the average rank for each card.

action times in each study were transformed into ranks and are shown in Table II.

The analysis of variance with ranked data was used to test the consistency of the ranks for the 12 groups. The chi-square for these data is 93.0, which is significant at the .001 level of confidence. This finding clearly supports our second hypothesis; that is, that the relative ranking of the Rorschach cards for reaction time remains significantly stable, independent of subject variability.

Form-Level

The form-level rating scale used in the present study contains eight categories. However, for purposes of analysis, the scale was dichotomized at the point closest to the median, between F and G. Table III shows the number of responses scored A to F and G to H for all subjects. The chi-square for these data is 81.38, which is significant at the .001 level of confidence. This finding supports our third hypothesis, which stated that the Rorschach cards would vary significantly with respect to the form-level of the first response.

TABLE III — The Form-Level Score Dichotomized into Two Categories, A–F and G–H, for the First Response to the Rorschach Cards

Rorschach Cards	Form-Level A-F	Form-Level G-H	Total
I	16	34	50
II	19	31	50
III	14	36	50
IV	16	34	50
V	5	45	50
VI	17	33	50
VII	31	19	50
VIII	23	27	50
IX	39	11	50
X	35	15	50

$X^2 = 81.38$ $p = <.001$

Table IV shows the rank order of the Rorschach cards for reaction time and form-level. The rank order correlation for these data is +.80, which

TABLE IV – The Rank-Order of the Rorschach Cards for Reaction Time, Form-Level and Judgment of Difficulty

(N = 50)

Rorschach Cards	Variables A Reaction Time	B Form Level	C Judgment of Difficulty	Intercorrelations Rho A-B	Rho A-C	Rho B-C	p
I	3	3.5	7	+.80			< .01
II	1	6	3		+.81		< .01
III	2	2	1			+.69	< .05
IV	6	3.5	5				
V	1	1	2				
VI	9	5	8				
VII	7	8	4				
VIII	5	7	6				
IX	10	10	10				
X	8	9	9				

is significant at the .01 level of confidence. Thus the data show that those cards which tend to be responded to quickly also tend to elicit better form response. This finding supports our fourth hypothesis.

Subjective Judgments of Difficulty

The analysis of variance with ranked data was used to test the significance of the subjective rankings of ease-difficulty. The chi-square for these data is 91.0, which is significant at the .001 level of confidence. This finding supports our fifth hypothesis which stated that the Rorschach cards would be judged significantly different from one another with respect to their ease or difficulty of interpretation.

Table IV shows the rank order of the Rorschach cards for reaction time, form-level, and judgment of difficulty. The correlation between judgment of difficulty and reaction time is +.81, which is significant at the .01 level of confidence. This finding supports our sixth hypothesis, which stated that those cards eliciting short reaction times would be judged significantly easier than those cards eliciting long reaction times. Our final hypothesis was tested by correlating the rank order of the Rorschach cards for form-level and judgment of difficulty. This correlation is +.69, which is significant at the .05 level of confidence. This finding supports our seventh hypothesis. Thus it is seen that those cards which are judged as less difficult to interpret yield shorter reaction times and better form-level for the first response than those cards which are judged as more difficult to interpret.

One further point should be made with respect to the judgment of ease-difficulty of the Rorschach cards. The question may be raised whether our subjects did, in fact, judge the cards in terms of difficulty or whether they simply made a global judgment, the dominant feature of which was the positive or negative tone that the cards stimulated. If the latter were true, then our general hypothesis concerning the relative difficulty of the Rorschach cards could be seriously questioned. For this reason, we asked our subjects to rank-order the cards on the basis of personal preference. The chi-square for these data is 72.6, which is significant at the .001 level of confidence. Thus the Rorschach cards do elicit significant differences with respect to affective tone. The ranks of the two sets of judgments, i.e., ease-difficulty and like-dislike were correlated. The rho is +.34, which is not significantly greater than chance. The failure to obtain a significant relationship between these two judgments indicates that our subjects were making discriminatory judgments and gives support to the independence of the judgment of ease-difficulty.

DISCUSSION

We have hypothesized that the Rorschach cards are not of equal difficulty, and we have tested this general hypothesis with three variables: a) reaction time, b) form-level of the first response, and c) subjective judgments of ease-difficulty. Our results have shown that the ten Rorschach cards are significantly differentiated on each of the three variables and that all correlations between these variables are positive and significant. The results, therefore, support the hypothesis of a factor such as ease-difficulty.

What are the stimulus characteristics of the Rorschach cards that tend to make some cards easier to interpret than others? If we assume that the amount of energy expended in achieving a *realistic* first response is directly related to ease or difficulty, that is, that the easier cards[10] require less effort than the difficult ones, then two factors appear to be important in explaining the card variation of ease-difficulty: a) the relative ambiguity of the whole stimulus (ambiguity to be determined empirically), and b) the location of the least ambiguous form in the blot.

Evidence coming from the experimentalists (2, 9, 32), as well as the clinician (6, 28), has shown that a subject typically attempts to organize the overall stimulus before proceeding to its sub-parts.[11] This suggests that where a card contains a relatively non-ambiguous form encompassing the entire stimulus, it will be among the least difficult cards. Two cards, Cards I and V, meet these criteria.

The importance of the second factor, i.e., the location of the least ambiguous form in the blot, can best be seen in the analysis of Card VIII. The animal figures on this card are probably the most structured of all the Rorschach forms (17). Nevertheless, this card is considered to be of medium difficulty. The difficulty arises from the fact that subjects first attempt to integrate the whole blot. Since the whole of Card VIII is relatively ambiguous, most subjects soon give up their attempt at achieving a *W* response and respond to the animal figures. (The data in this study and in the study of Beck et al (7) show that Card VIII elicits very few *W* responses). Thus a good deal of energy is utilized even before the first response is organized. The same pattern holds for all cards which are fairly difficult to integrate as a *W* and in which there is one relatively non-ambiguous detail, e.g. Cards II, VI, VII, and IX. Naturally, the more ambiguous the details in these cards, the more difficult it will be to achieve an adequate first response.

Card X is one of our most difficult cards despite the fact that it contains a number of relatively non-ambiguous forms. The large number of isolated forms on this card not only makes integration of the whole stimulus difficult but also delays most subjects from focusing on any one detail. Card IV, which is a relatively solid blot and which elicits the third highest percentage of *W* responses (7), is not among the least difficult cards simply because the whole stimulus is not as structured as the forms in Cards I and V (7).

Card III, which is the most difficult Rorschach card to integrate as a *W* response, is, nevertheless, one of the easiest cards to respond to. At first glance, this appears contrary to our general hypothesis, although closer analysis will show otherwise. Card III

[10] We now have three criteria for measuring ease-difficulty. In the following discussion, reaction time will be used as the main criterion since this variable has been tested with the largest number of subjects and has a great deal of stability.

[11] The fact that the average reaction time for *W* responses, in the present study, was shorter than for *D* responses on seven out of eight Rorschach cards is additional evidence that subjects try to organize the whole stimulus before responding to the details. No comparison was made for Cards III and V since the former elicited only one *W* response and the latter only two *D* responses out of a possible 50.

contains separate forms that are so widely spaced that a *W* response is rarely given to this card (7). It is our impression that the distance barrier is so great and the details so unrelated that *most* subjects responding to this card do not even *attempt* a *W* response. It we are correct in this assumption, then it is understandable why this card presents little difficulty for most subjects. Card III contains a relatively non-ambiguous form, the human figure, which makes up the greater part of the blot. In addition, the central location of this form and its contrast to the chromatic forms give it dominance in this blot.

In summary, our findings have shown that the ten Rorschach cards are not equal in difficulty, and we have attempted to explain the variation in difficulty in terms of the relative ambiguity and organization of the Rorschach stimuli. It should be pointed out that the above discussion deals entirely with the Rorschach stimuli and not at all with individual reactions to these stimuli. This is done merely to point up the importance that the particular stimuli play in a Rorschach protocol. Our intention is not to underestimate the value of the clinical approach to the interpretation of the Rorschach. However, we feel that the clinician must have a thorough understanding of the cards in order to make a realistic evaluation of the responses.

The failure to examine rigorously the role that the stimuli play in producing Rorschach responses has, we believe, led some of our theorizing about the Rorschach into blind alleys. A good example of such a blind alley is the concept of "color shock." This concept was developed by clinicians who noted that neurotics tend to require more time for their initial responses and produce fewer and poorer responses to the chromatic than to the achromatic cards, particularly to Cards VIII, IX, and X (6, 16, 28). These reactions were interpreted as resulting from the neurotic's inability to handle the emotional impact of the chromatic properties of these blots. The concepts of "color shock" and "shading shock," the latter being developed by similar reasoning, have been used as the most important indicators in the diagnosis of neurotics (16). However, what has been overlooked in the development of the concept of "color shock" is that the chromatic cards are just as difficult for normals to integrate as they are for neurotics (see Table II). More recently, studies have been carried out using the standard set of Rorschach cards and an achromatic set. The absence of color on Cards VIII, IX and X has failed to make the associations to these cards any easier than when color was present. This was found for normals (1, 12, 17, 23) as well as neurotics (3). A further analysis of the effects of color on reaction time for normals and neurotics, when both the standard and achromatic cards are used, shows that while color has no significant effect on the reaction time for normals, it tends to shorten the reaction time for neurotics. This finding is contrary to the traditional view that the emotional impact of color delays response time for neurotics. The above discussion demonstrates the dangers of interpreting reactions to the Rorschach cards without first having a thorough knowledge of the extent to which the stimuli contribute to these reactions.

Implications for Future Research

Earlier in the paper, we suggested that the Rorschach test could be viewed as a conflict situation. On the one hand, the instructions to find things in the ink-blots create a certain amount of tension, the reduction of which occurs when a response is given, while on the other hand, the need to adhere to reality tends to block the immediate reduction of tension by inhibiting impulsive associations. Thus the two opposing forces in the conflict are: a) the need to respond as quickly

as possible, and b) the need to adhere to reality. This conflict is of low intensity and easily resolved for inkblots that are relatively non-ambiguous. Here, familiar and reality-oriented associations occur readily. The conflict is more intense for inkblots that are relatively ambiguous and to which reality-oriented associations do not readily occur. In the latter situation, one must be capable of sustaining the mounting tension and avoid closing the gap too soon in order to have an opportunity to respond realistically.

The above discussion provides a theoretical background for our finding that there is a high positive and significant relationship between reaction time and form-level of the first response for our population of "normal" subjects. It is our hypothesis that this relationship cannot occur to any significant degree unless the subjects participating in the experiment have a relatively high frustration tolerance. An analagous relationship between reaction time and form-level is the relationship between decision time and accuracy in a psychophysical experiment. When subjects are required to judge which of two lines is longer, the decision is generally rapid and accurate when the difference in the two lines is great. As the difference diminishes, subjects must delay their decision if their judgments are to achieve better than chance accuracy. Here again the frustration tolerance of the subjects must be fairly high in order to achieve a high positive correlation between decision time and accuracy. Our theory would lead us to predict that the correlation between reaction time and form-level for the first response and between decision time and accuracy on a psychophysical experiment would be significantly lower for neurotic subjects, who are likely to have a low frustration threshold (15, 29), than for normal subjects.

Finally, the results in the present study have shown that an adequate analysis of Rorschach data will require a scheme for assigning weights to the reactions of each card. Such a scheme should be developed not only for reaction time (30) and form-level (33) but for other dimensions as well.

The need for a weighting system is particularly evident for *M* responses. In the present study, we found that four cards, Card I, II, III, and VII elicited 81 percent of all *M* responses, and that half of these were given to Card III. The remaining six cards yielded only 19 percent of the *M* responses. These data argue against the current method of arriving at a subject's *M* score by simply adding his *M* responses and giving equal weight to each of these responses. A more thorough analysis of the dynamics underlying the *M* response may show, as Beck (4) has suggested for *W* responses, that an *M* response to Card VIII, for example, might have quite a different interpretation than an *M* response to Card III.

SUMMARY AND CONCLUSIONS

The present study was designed to investigate the relative ease or difficulty of the Rorschach cards. We defined ease or difficulty as those characteristics of the blots which tend to facilitate or impede associations. We assumed that the ease or difficulty of the blots would be reflected by three specific variables: a) the reaction time for the first response, b) the form-level of the first response, and c) a subjective judgment of the relative ease or difficulty in associating to the cards.

Seven hypotheses were tested and each was confirmed. Our results suggest that the ten Rorschach cards are *not* equal in difficulty. This conclusion is based on the fact that the cards to which responses are given quickly are the same cards which tend to have a higher form-level for the first response, and which are judged as easier to interpret than cards yielding longer reaction times.

Two factors were used to explain card variation in difficulty: a) the rel-

ative ambiguity of the whole stimulus, and b) the location of the least ambiguous form in the ink-blot. Since most subjects first attempt to organize the ink-blots as a whole, it was suggested that those cards in which the whole blot is relatively non-ambiguous will be among the least difficult cards. Cards I and V meet these criteria. The ease or difficulty of the other cards were also explained in terms of these two factors.

The ease or difficulty of the Rorschach was shown to have a significant effect on the reactions to the ink-blots, and the danger of overlooking the contribution of the stimuli in the interpretation of a Rorschach protocol was indicated. Finally, some implications for further research were outlined.

References

1. Allen, R. M. The influence of color in the Rorschach test in a normal population. *J. proj. Tech.*, 1951, *15*, 481-485.
2. Bartlett, F. C. An experimental study of some problems of perceiving and imaging. *Brit. J. Psychol.*, 1916, *8*, 222-266.
3. Baughman, E. E. Rorschach forms with altered stimulus characteristics. Unpublished doctor's dissertation, Univer. of Chicago, 1951.
4. Beck, S. J. Configurational tendencies in Rorschach responses. *Amer. J. Psychol.*, 1933, *45*, 433-443.
5. Beck, S. J. *Rorschach's test.* Vol. I. *Basic processes.* New York: Grune & Stratton, 1950.
6. Beck, S. J. *Rorschach's test.* Vol. 2. *A variety of personality pictures.* New York: Grune & Stratton, 1945.
7. Beck, S. J., Rabin, A. I., Thiesen, W. G., Molish, H., and Thetford, W. N. The normal personality as projected in the Rorschach test. *J. Psychol.*, 1950, *30*, 241-298.
8. Bockner, R. and Halpern, F. *The clinical application of Rorschach's test.* New York: Grune & Stratton, 1942.
9. Brigden, R. L. A tachistoscopic study of the differentiation of perception. *Psychol. Monogr.*, 1933, *44* (Whole No. 197), 153-166.
10. Cartwright, D. Decision time in relation to the differentiation of the phenomenal field. *Psychol. Rev.*, 1941, *48*, 425-442.
11. Cartwright, D. and Festinger, L. A qualitative theory of decision. *Psychol. Rev.*, 1943, *50*, 595-621.
12. Dubrovner, R. J., Von Lackum, W. J. and Jost. H. A study of the effects of color on productivity and reaction time in the Rorschach test. *J. clin. Psychol.*, 1950, *6*, 331-336.
13. Frenkel-Brunswick, E. Intolerance of ambiguity as an emotional and perceptual personality variable. *J. Pers.*, 1949, *18*, 108-143.
14. Gardner, G. E. Rorschach test replies and results in 100 normal adults of average I. Q. *Amer. J. Orthopsychiat.*, 1936, *6*, 32-60.
15. Hybl, A. R. and Stagner, R. Frustration tolerance in relation to diagnosis and therapy. *J. consult. Psychol.*, 1952, *16*, 163-170.
16. Klopfer, B. and Kelley, D. M. *The Rorschach technique.* Yonkers-on-Hudson, New York: World Book Co., 1946.
17. Lazarus, R. S. The influence of color on the protocol of the Rorschach test. *J. abnorm. soc. Psychol.*, 1949, *44*, 506-515.
18. Lewin, K. *Dynamic theory of personality.* New York: McGraw-Hill, 1935.
19. Lewin, K. The conceptual representation and measurement of psychological forces. *Contr. Psychol. Theory*, 1938, *1*, No. 4.
20. Matarazzo, J. D. and Mensh, I. N. Reaction time characteristics of the Rorschach test. *J. consult. Psychol.*, 1952, *16*, 132-139.
21. Meer, B. and Singer, J. L. A note on the "father" and "mother" cards in the Rorschach inkblots. *J. consult. Psychol.*, 1950, *14*, 482-484.
22. Meer, B., Stein, M. I., and Caron, A. J. A further study of the tachistoscopic Rorschach. Paper read at Midwest. Psychol. Ass., Cleveland, 1952.
23. Meyer, B. T. An investigation of color shock in the Rorschach test. *J. clin. Psychol.*, 1951, *7*, 367-370.
24. Miale, F. R. and Harrower-Errickson, M. R. Personality structure in the psychoneuroses. *Ror. res. Exch.*, 1940, *4*, 71-74.
25. Moses, L. E. Non-Parametric statistics for psychological research. *Psychol. Bull.*, 1952, *49*, 122-143.
26. Rabin, A. I. and Sanderson, M. H. An experimental inquiry into some Rorschach procedures. *J. clin. Psychol.*, 1947, *3*, 216-225.
27. Rapaport, D. *Diagnostic psychological testing.* Vol. 2. Chicago: The Year Book Publishers, 1945.
28. Rorschach, H. *Psychodiagnostics.* Berne: Hans Huber, 1942.
29. Rosensweig, S. A dynamic interpretation of psychotherapy oriented towards research. In S. S. Tomkins (Ed.), *Contemporary psychopathology.* Cambridge, Mass.: Harvard Univer. Press, 1946, Pp. 235-243.
30. Sanderson, H. Norms for "shock" in the Rorschach. *J. consult. Pychol.*, 1951, *15*, 127-129.
31. Siipola, E. M. The influence of color on reaction to ink-blots. *J. Pers.*, 1950, *18*, 358-382.
32. Smith, F. An experimental investigation of perception. *Brit. J. Psychol.*, 1914, *6*, 321-362.

33. Stein, M. I. and Meer, B. Perceptual organization in the study of creativity. *J. Psychol.*, 1954, *37*, 39-43.

34. Uehling, H. F. Rorschach "shock" for two special populations. *J. consult. Psychol.*, 1952, *16*, 224-225.

35. Wallen, R. The nature of color shock. *J. abnorm. soc. Psychol.*, 1948, *43*, 346-356.

Received October 26, 1953

Personality Development as Reflected in Rorschach Behavior: A Case Study [1]

T. W. RICHARDS
Louisiana State University

This study is an attempt to demonstrate the relationship between the individual's performance with test materials—specifically the Rorschach test—and the experiences which determine such performance. The single case presented is that of a boy during his first eighteen years of life. He is one of the group which has been studied longitudinally at the Fels Research Institute, Antioch College, Yellow Springs, Ohio.

Bill Roberts, the subject of this study, spent the major part of his first eighteen years in a town of about 10,000; he is the only child of a middle class family. The father, a professional man, was able to provide fairly well for his family even through the depression years.

Much about Bill's case serves to qualify it as an almost classic example of the Oedipal situation. By his father he was treated harshly and at times even brutally. By his mother, on the other hand, he was treated with protection, solicitude, and indulgence — almost a continuous process of seduction.

From his earliest months, Bill was allergic; with symptoms sometimes of eczema, at others "sinus trouble" or "hay fever," most frequently and consistently they were asthmatic. Despite this frequent illness his physical development was such that in both height and weight he was, at eighteen years, about one sigma above the Fels mean.

Individual mental tests yielded IQ's varying from 117 (at six years) to 149 on Form M of the Revised Stanford Binet (at seventeen years); a Wechsler-Bellevue IQ obtained at age 16 was 125.

Certain data regarding his life situation during these first eighteen years, with indication of points at which he performed with the Rorschach are shown on the following page.

It is seen that Bill was given the Rorschach test six times; trends shown by Rorschach scores are presented in Table I.

Most impressive are the following trends:

1. An increase in number of responses (R), such that the boy gives 76 at 15-2, and 63 at 15-10.
2. A decrease in number and proportion of whole responses (W), such that he gives only 4 (W) at 15-10.
3. A marked increase in the use of small details (Dd).
4. An increasing tendency to perceive *parts* or *details* of animals and humans, rather than the whole figure. (Ad and Hd rather than A and H.)
5. A high and increasing proportion of pure form (F).

These findings indicate that Bill, as he developed from his sixth through his sixteenth year, became severely constricted and critical, with practically no spontaneity at all; in the Rorschach situation he seemed to want only to disguise himself, by means of a compulsive drive to produce. He was unable or unwilling to trust his imagination.

In order to examine in greater detail this rather exaggerated developmental picture, a card-by-card com-

[1] This study was made possible by a grant from the National Institute of Mental Health and the cooperation of the Fels Research Institute, Antioch College, Yellow Springs, Ohio. The author wishes to acknowledge his indebtedness to both.

	Birth	
Breast fed first six months		Eczema
	1	
	2	
		Hay fever and asthma
	3	
Boy rooms with parents		Asthma
	4	According to mother, disliked being photographed in nude
Mother answers all boy's sex questions "except father part"		
		Asthma
	5	Dreams of wolves and bears
	Rorschach 1	
Boy has own room	6	
	Rorschach 2	
Parents quarrel re discipline		
Father dissatisfied with job	7	
	Rorschach 3	
Father argues with boy incessantly		Asthma and hay fever
Father changes job	8	
Mother helps boy dress, bathe		Asthma
	9	
Father away from home much		Boy dreams of danger to mother, asks to go to her bed
	Rorschach 4	
		Hay fever and eczema
	10	Boy discusses sex freely with mother, tells her "dirty" jokes
		Hay fever and asthma
	11	
Father sometimes "thrashes" boy		Resentful of father's discipline
Father critical of boy, mother indulgent		Lazy (according to teachers)
	12	Social relationships unsuccessful; tends to play alone
Mother still ties boy's shoes occasionally		Asthma
	13	
	14	Fairly good athlete but avoids sports
		Interested in dramatics, music
Father away from home entirely	15	Many friends; a steady girl briefly
Boy lives closely with mother		
	Rorschach 5	
	Rorschach 6	
	16	
		Very interested in girls
Boy sent to boarding school	17	Hated boarding school
		Interested in electronics
	18	

parison of the six protocols is presented in the accompanying chart.

Beginning with the assumption that the Rorschach figure most provocative of human content and of movement, Figure III, represents for Bill the dynamics of relationships between important people in his life situation—specifically his parents—we note that the response to III, at 5-9 is "Butterfly flying through two people," as if this were Bill's own role in relation to his

TABLE I—Frequencies of Various Rorschach Scores in Six Protocols (William Roberts)

Score	Age 5-9	6-6	7-6	9-11	15-2	15-10
R	10	11	13	59	76	63
W	10	10	8	8	12	4
D		1	5	40	31	26
d				5	14	11
S+dd				6	19	22
M		2	1		1	1
FM	1		1	8	4	2
m				1	2	1
K	1					
k						
FK	1		1	3		1
F	7	8	6	35	68	55
Fc				4		1
c						
C′						
FC			4	7	1	
CF		1		1		2
C						
H		2	1	3	4	3
Hd				3	19	16
A	8	3	6	31	23	18
Ad			1	6	24	19
Aobj				2	2	1
N				2		1
Obj		1	1	7	2	2
Pl	1	2	3	3		1
Cloud	1		1			
Fire		1				
Other		2		1	2	2

parents. At 6-6 these people become two men lighting a fire; here the action emanates from the people, and they do something cooperatively and warming. At 7-6 their activity is less primitive than lighting a fire; they are talking to each other. The action is more intellectual, but it is cooperative and communicative. At 9-11 the people are of another planet, and they are doing nothing. The qualification "two" people disappears, but the *twoness* is preserved in the new, supplemental response following the butterfly, "two trees" and "two fishes." The spontaneity of fire and movement and the behavior of real people has gone. In the protocol at 15-2 this depersonalizing is extended—he says there "might be two men, or two fish, or two monkeys hanging by their tails," with the culmination of this de-identification in the record of 15-10, "two men's heads," a response tossed in with several non-human responses.

The development for Figure II is no less interesting. For Bill, the "pull" of II for a whole response is strong; the unitary butterfly seen at 5-9 acquires at 6-6 an element of cleavage—a rock with a hole in it and at 7-6 "something with two ears," (listening?). At 9-11 the *whole* response is replaced by two bulldogs; there is an explosion of a firecracker, a tool, and finally a ghost (giving to the unity and its disruption a morbid cast). The whole response reappears at 15-2, but is broken up immediately into rabbits which are running. It is reintegrated into the doughnut response (an object with a hole in the middle, like the rock at 6-6) and Bill comments "I don't see much more." At 15-10 all movement is gone, and we have animals, human and animal profiles — cautious, flat and indefinite percepts.

The impression given by this sequence for both II and III is that at 9-11 Bill is reacting to disruption in

the configuration represented by these blots—family or whatever it may be—and that his way of reacting is to depersonalize the material. The later, adolescent records suggest a partial resolution of tension about his relationship to these figures, by means now of a refuge in perfectionism as a protection against exposure.

It is possible to trace the shift through others of the cards and find suggestions that may serve to confirm or refute the hunches suggested on the basis of II and III. Card IV, for example (the "father" figure) is dehumanized at the start; it is a tree. But at 7-6 it becomes a "nice oak tree." At 9-11 the whole is retained, but it is now a bat and, after some details are given, a bearskin. This pelt characteristic reappears at 15-2, and is followed by several details, including two snakes "coming up, being charmed," and finally by the whole "man (I guess sitting on a post or something)." But at 15-10 the whole disappears entirely. In a very interesting way, the upper projections in Figure IV which were seen, at 15-2, as "two snakes, coming up, being charmed" are used at 15-10, together with the white space they enclose and part of the blot itself to form a bird's head—a rare response. In this strained fashion, the animal detail is used to deal with the snake charming potential by a sort of encephalization.

For the "mother" figure, Card VII, the theme early is an integrated one of distance, tentative regard and, at 7-6, of intercommunication; these dynamic properties disappear at 9-11, giving way to animal details entirely. And at 15-2 and 15-10 (when Bill lived exclusively with his mother) his responses for Figure VII with the exception of "ferocious looking people" are strictly form responses and almost entirely heads and profiles.

DISCUSSION AND SUMMARY

Longitudinal analysis of the Rorschach performances of this single case presents a strong argument for the interpretation of response content and dynamics as a reflection on the one hand, of crucial experiences in the past, and on the other, of the individual's "style" of dealing with anxiety. This boy's ability to deal with situations requiring integration of interpersonal experiences seemed to be a function of the integrity of his family configuration. Lack of harmony between his parents, stemming principally from their disagreement regarding Bill himself and how he should be reared, seemed to destroy the boy's capacity for spontaneity, such that by adolescence he had to utilize in the Rorschach situation an exaggerated, compulsive drive to quantity production—a deliberate avoidance or distortion or displacement of the imaginative behavior which typified his pre-adolescent manner of handling the problem.

Interpersonal relationships are threatening to Bill as an adolescent, as a consequence of pre-adolescent experience at home. So far as the Rorschach is concerned, in situations in which interpersonal activity is most provocative he is at greatest pains to disguise his spontaneity because he does not trust it. Rather than simply reject the situation, because of some necessity to make the best impression he can, he chooses *production* and represses almost everything else—in this way disguising his sensitivity to qualities of the inkblots (other than form of the most detailed and insignificant sort) and his capacity to project vitality into his concepts. To keep the material away from himself, and yet to do something with it by way of disposing of it, he uses *parts* of people and animals—old men, ladies with their hair up, wolves' heads—in exaggerated abundance as his defense against the human appeal of the blots and the pain he would experience if he faced humanity openly.

In conclusion—the inferences one can make from a single case are distinctly limited, but the findings in

Card	5-9	6-6	7-6	9-11	15-2	15-10
I	Butterfly (W)	Butterfly (W)	Two bears on a mountain (W)	A bat (W) A dog A frog A bear	Gives me the impression of a bat (W) Uh—Might be face of a goat (Later) Two animal heads	A couple of bears (heads) Could be a butterfly, I suppose (W) Two men's faces Two heads Two profiles A couple of mountain sides Two dogs' heads Could be the body of a man, no head
II	Another butterfly (W)	Rock with a hole in it (W)	Something with two ears (W)	I see two bulldogs Two sorta like heads A firecracker going off A wrench—it's got that line through it A ghost	Butterfly (W) Two rabbits (might be running) Doughnut I don't see much more	Butterfly (W) Two rabbits (F only) Two profiles of men A couple of dogs' heads,—profiles Two more
III	Butterfly flying through two men (W)	Two men lighting a fire	Two somethings (people) talking to each other	People on Mars (F) A butterfly Two trees Two fishes	Butterfly in this too Might be two men Or two fish Or two monkeys (hanging by their tails) Two birds Guess that about does it	Two rooster heads Two wolves' heads Two men's heads Head of two birds Butterfly Two monkeys (F only) Two more wolves' heads
IV	Tree (W)	A tree	A nice oak tree	Whole thing looks like a bat Two feet Top part of a dog's head Whole thing looks like a bearskin	Animal rug (cow, maybe) (W) Head of two camels Head of a cow Faces of two old women Want just parts of it? (YES) Two snakes (coming up, being charmed) Faces of two ladies with their hair up Two bear's heads I remember what I told last time Man (W—guess sitting on a post or something)	Two legs with feet" Two heads of birds (dr) Two dogs' heads A wolf's head with fangs Face of an old man with a very long nose Profile of a pig's head Two more profiles of a man

post or something)

Card	5-9	6-6	7-6	9-11	15-2	15-10
V	Another butterfly	Butterfly	A bat	A bat (W) A butterfly (W) A lion, back part, the legs going down. The heads come together Two snakes, four snakes (Looks like the heads, up in the air)	Butterfly; I remember that (W) Two alligators' heads Pair of pliers Two ladies' faces Two more ladies' faces Two men's faces, old men	Butterfly, (W) Two alligators' heads Two men's profiles Two men's profiles with beards Two women's heads with hair up, way up A little bottle floating on water A pair of pliers
VI	Cloud	Something like another tree, only it has whiskers. Oh, that looks something like an owl	Tree, with roots showing	Well, a dragon-fly Space ship (D) Tree, with flowers around it (W) A little butterfly (Dr)	That looks like an animal rug (W) Cat's head And a butterfly Two horses' heads Figure that resembles a Zombie (stands stiffly; no motion, no arms) Don't remember this one	A cat (a cat skin, furry—W) A boy with a turban on his head An owl Two parrots' beaks A butterfly
VII	Two bears on the point of a hill (W)	Two men standing on rocks, looking at each other (W)	Two dogs on butterflies' wings talking to each other (W)	Two dogs with their ears up A butterfly Two dogs with heads around and front paws up A cave Two more dogs standing on front paws	Two boys' heads Two birds The butterfly Two more birds' heads Two men's faces Two more men's faces Two bears' heads Two more faces—ferocious-looking people Two dogs' heads	A butterfly Two heads Two men's heads with long beards Two animal heads
VIII	Another butterfly	Sailboat	Sunfish	An animal (usual) Skeleton of a dog's head with ears attached A butterfly with half the wings off Another beautiful butterfly A wishing bone from a chicken Two hens laying their eggs Another butterfly	Two tigers (slinking) Two butterflies Two men's heads A moose face Two buffalo Two alligators' heads Two more alligators' heads Two men's heads Two boulders (lot of iron in it, type you see in Germany). Remember this card	A butterfly here A couple of leopards (crouching) Cow's head Lake water A tree Two anteaters' heads

Card	5-9	6-6	7-6	9-11	15-2	15-10
IX	Another butterfly	A fire	A tree with a couple of something on top	A butterfly; a great big butterfly (W) A butterfly Another ghost Two seals A clothes line with some pants hanging on it A spear An eskimo going down hill Top of an elephant Two boats A snake And an alligator, too	Butterfly (W) Two animals' eyes Two babies' heads Two men's faces Animal's head,—face, rather Two dogs' heads Two deer's heads Two old men's faces Sword Two little animals Two dogs' heads Two men's heads. Don't believe I remember this	Well, there's a butterfly (D) Profile of two men There is a girl A wolf head; two wolves' heads
X	Another butterfly	Don't know. A house	Spider Two red clouds, something blue in the middle A green bird	Two spiders Two flies Two flower gardens Half of a butterfly; two halves A little airplane with bags out to shoot at Two amazon animals; Amazon Valley A man in a gas mask Two snakes A stream A cove; two coves Two more halves of butterflies	Butterfly (W) Two spiders Rabbit Horse's head Two birds Two sea horses Two men's faces,—make that four Two more men's faces Two dog's heads Fish Two men's faces Two horse heads Two big husky fellows shaking hands Two moles Little dog's head with two big ears. Think I remember this one	Two spiders Two cherries Two seacows Two bears Two birds Two canaries Two men shaking hands Rabbit's head Moose head Profile of two men

this one case, as in several others that have been analyzed similarly, (1, 2) suggest that longitudinal research of this sort will do much toward validation or refutation of basic hypotheses in the field of child development.

REFERENCES

1. Richards, T. W. The individual child's development as reflected by the Rorschach performance. *J. Proj. Techniques*, 1948, *12*, 59-64.

2. Richards, T. W. Mental test performance as a reflection of the child's current life situation: a methodological study. *Child Development*, 1951, *22*, 221-233.

Received January 18, 1954

Lowenfeld Mosaics Made By First Grade Children

URSULA G. STEWART, M.D. and LORRAINE A. LELAND, PH.D.

The present authors have been using the Lowenfeld Mosaic since 1948 and have found it fruitful, when used in conjunction with other projective techniques, in the evaluation of personality patterns of children, adolescents and adults. It is especially helpful in that it does not require verbalization on the part of the subject, gives an over-all impression (such as is obtained from drawings) and affords the examiner an opportunity to determine how the individual handles himself in concrete situations. Children usually find it enjoyable since it involves a simple manipulatory activity that is at once creative and new to them. It has proven a good "ice-breaker" with the shy and negative boy or girl.

Since, empirically, this test has been found helpful in the diagnosis of the maladjusted individual, the authors felt it would be of value to learn whether the patterns so far obtained are also found in the normal population, and whether predictions can be made from them in terms of the individual's adjustment. Young children of school age (first graders) were used as subjects. Since it is difficult to evaluate total adjustment without knowing both the youngster and his family, investigation was confined to one area only, that of school adjustment. However, the importance of this area should not be minimized since school plays an important role in the young child's life. First, the average boy or girl spends one-third of his waking day in school. Secondly, it is his first venture into the community away from the protecting influence of the home. Thirdly, his success or failure in school radically affects his concept of himself as an adequate person.

Subjects: With a view toward obtaining as unselected a group as possible, all first grade children in two Long Island schools were examined until a total of 100 had been reached. These boys and girls ranged in age from five years eight months, to seven years three months. Ten percent fell below six years; eighty-seven percent fell within the six year group; and three percent were older. All had had kindergarten training, but only one had had previous first grade experience. Intelligence test ratings indicated a positively skewed distribution, a fact not surprising since in these schools children below a certain mental age are excluded from first grade. Three subjects had IQ's below 90 (IQ 75, 83 and 86); 52, between 90 and 109; 25, between 110 and 119; and 20, between 120 and 141. All of these children, with the exception of one negro boy, were white and all came from average-income homes.

Procedure: Two examiners known to the children did all of the testing. Each of the first 80 children was given a Stanford-Binet examination which was followed immediately by the mosaic. Due to unexpected curtailment of time, the last twenty subjects had to be examined on a group test, (the Pintner-Cunningham) in groups of five. However, the mosaic was administered individually and followed the mental testing. As with most youngsters in this age group, these boys and girls enjoyed the activity and the individual attention given them.

Lowenfeld's mosaic test consists of 456 plastic pieces arranged in a box according to shape and color. A tray is placed directly in front of the child who is seated at a table and one of each type of chip is placed on it by the examiner. When these have been replaced in the box, the subject is instructed to "make something, make anything you like." Colored tracings

were kept of the child's performance, notes made on his method of attack and the mosaic later discussed with the child. This was in accordance with the technique worked out at the Catholic University, Washington, D.C. May 27, 1950.

The child's adjustment in school was evaluated in terms of the teacher's comments. One of the examiners interviewed all of the teachers, making notes concerning the following areas (1) school achievement, especially reading (2) the child's relations with his classmates (3) variability and stability in his behavior (4) outstanding or deviating characteristics. No rating scale was attempted but a descriptive summary of the above was made on each child. On the whole, it was found that the teachers knew their pupils fairly well since the classes were small, ranging in number from 15 to 22. The teachers themselves were well motivated to observe the children rather objectively because of some concurrent in-training being given at the time. Two years later, interviews were again held with the children's teachers and additional follow-up data became available on 94 of the 100 subjects.

Results: The mosaic patterns were found to fall in the following categories:

Classification	*Description*	*Number of Subjects*
Pre-fundamental	Where the subject places single pieces haphazardly on the tray.	2
Fundamental	Where a single type of chip is used to make a simple geometric pattern; such as four squares forming a box, triangles making a hexagon, etc.	4
Hollow-circle	Where the center of the pattern is left empty.	2
Attempt-at-covering-the-tray	Where the subject seems to be trying to cover the complete surface of the tray.	16
Representational	Where the subject tries to depict something concrete, such as a house, tree, person, scene, etc.	56
Designs	A pattern, symmetrical or a-symmetrical, which does not represent anything concrete to the subject and which he frequently describes as "just a design."	20

Prefundamental classification: Although this type is seldom seen at this age, it is apparently not a reflection of low intelligence since both of the subjects were above average mentally. Both were making normal academic progress in the first grade but were described by their teachers as noticeably aggressive in their behavior toward other children. Two years later, one was still doing well in his school work while the other was rated as poor in reading. Both youngsters continued to show anti-social aggressive behavior while, in addition, the second subject was described as "erratic and inattentive."

Fundamental classification: Like the pre-fundamental, this type is infrequently made by the six year old child. It again is apparently not directly influenced by intelligence since the four subjects were rated as normal mentally. However, as distinguished from those making the pre-fundamental patterns, these youngsters were making normal adjustments in all areas not only in the first grade but also two years later.

Hollow-circle classification: Again this is a type rarely made by the six year old child. Both of these mosaics were made by children who seemed to feel inadequate; one, by a seven year old youngster with an IQ of 75 who was having difficulty with his school work; the other, by a child of normal intelligence who was dominated by an older sister but who was making satisfactory academic progress. The follow-up reports two years later remained substantially the same.

Attempt-at-covering-the-tray classification: The 16 who used this method were all average or better in general intelligence. Seven of the 16 made stereotyped, rigid patterns, employing

one, two or three types of chips and fitting them together in small patterns which were repeated over and over again. It is the type of mosaic which, when found in an adult, is considered as "compulsive." Six of these children exhibited personality problems (for example, unusual aggressiveness, over-lability, over-conscientiousness) in the first grade, four of them also having difficulty with their school work. The follow-up reports in the third grade remained the same. The seventh child had been characterized by the first grade teacher as "mature and stable." However, in the third grade, difficulties began to appear. He was overly sensitive, cried easily and needed a good deal of emotional support from the teacher.

Of the nine who attempted to cover the tray in a freer fashion, six showed elements of good organization in their work. Both then and in the follow-up report they were regarded as well-adjusted in all areas. Three children made little attempt at organization but apparently were making good adjustments to school. Two years later, however, one was described as a very anxious child who was doing poorly in all areas; another as very aggressive, restless and poor academically; and the third, as a perfectionist who was doing well in his school studies.

Representational classification: This type of mosaic was made by more than half of our group. With the exception of one youngster with an IQ of 83, all were normal or better in general intelligence.

Human mosaics: Seven subjects made whole persons or "faces." The three who made whole human beings were considesed both in first and third grades to be making good adjustments in all areas. However, of the four who made "faces," two showed evidence of poor adjustment over the two year period. The one youngster made a "face" which filled the tray completely, had a fringe of spiky red hair at the top edge, red eyes and an enormous black and red mouth. He was regarded in the first grade as "appealing but a constant source of trouble"; two years later he was described as "fighting with the other children, always breaking rules and, in general, a problem." The second youngster who depicted a "head" by merely placing a square on top of an isosceles triangle, was described by both first and third grade teachers as immature and below average in academic achievement. The two children who made the more usual "faces" (with eyes, nose, mouth) were considered as making normal adjustments in the various areas. Unfortunately, follow-up data are not available on them.

Houses were made by twenty subjects, or one-fifth of our total group.

Primary system houses were depicted by three children (Primary system thinking involves mental concepts which are confused in spacial and bodily orientation but are not disturbed in mental or emotional content. Most children gradually lose this way of thinking as they acquire words. However, those of superior intelligence are frequently unable to free themselves because of the firm entrenchment of the primary system before the development of speech). Two of these youngsters were described over the two year period as immature and inferior in academic achievement. The third, also regarded as immature, was not available for follow-up study two years later.

Two-chip houses (a triangle placed on top of a square) were made by four youngsters all of whom were doing well in the first grade. Similar findings were reported two years later on the three who had remained in the school.

Mediocre houses (where a number of chips were used but where there was no elaboration of detail) were

constructed by three subjects all of whom were regarded as well adjusted in the first grade. Similar reports were made two years later on the two children who had remained in the school system.

Houses with details (windows, doors, chimneys, furniture seen through windows, etc.) were made by ten subjects and with the exception of one were well executed. The five youngsters who included doors and several windows were regarded over the two year period as well adjusted in all areas. Of the remaining five who used elaborate detail but omitted doors and windows (two of the mosaics had chips which might be interpreted as "windows" but which had not been so described by the subjects) four were consistently characterized as unstable and one as immature. None were doing well in academic work. Two of these houses were heavily overshadowed by smoke.

Scenes were depicted by nineteen subjects. Fourteen were of the popular type, consisting of grass, sky, houses, sun, etc., and using the bottom edge of the tray as the foundation. With the exception of two children, all continued to make adequate adjustments in school over the two year period. Of these one had an IQ of 83 which made competition difficult for him while the other, a superior child, had an overly anxious and protective mother who did not permit him to utilize his own resources. This latter boy not only had extreme difficulty with reading but also in his relationships to his classmates. Five subjects made scenes with dysphoric feeling tones (a flower losing its petals, landscapes with thunder, lightning and clouds, torn-up and confused roadways) were regarded over the two year period as disturbed children, four out of the five doing poorly also in the academic work.

Miscellaneous objects (such as television sets, steam shovels, windmills, trains, boats, etc.) were made by ten children who were bright-normal or superior in intelligence. With the exception of the boy to be described all continued to make good all-round adjustments in school over the two year period. This boy (IQ 137) made a steam shovel, using the chips in a clever manner but so placing it that he had difficulty in getting all the chips on the tray. It was so arranged that the pattern could fall apart at almost any given point. In other words, this youngster had an elaborate idea, the reflection of his mentality but his instability prevented him from carrying it out successfully. On the whole, the children who made objects seemed to have many ideas which they were eager to express but no personal needs which had to be "projected."

Design classification: Twenty subjects, or one-fifth of the total group, responded in this manner. All of these children were average or better in general intelligence.

Symmetrical patterns made toward the center of the tray were constructed by six youngsters who continued over the two year period to make good adjustments in all areas.

Free, a-symmetrical patterns made toward the center of the tray were depicted by five children who made good adjustments in all areas over the period in question.

A-symmetrical designs, clinging to the edge of the tray, were made by eight youngsters all of whom were apparently making adequate adjustments to first grade. Seven, however, were described two years later as "immature and with the exception of one girl unable to keep up with the group academically." No follow-up report was available on the eighth. The girl just mentioned was of superior intelligence but immature for her age and mental ability. She made an elaborate edge pattern inside of which was a "frame and item" pattern (where

the subject makes a small pattern towards the center of the tray and "frames it with other chips"). This type is said to occur fairly frequently in England but the present authors have found it very infrequently among their subjects.

Two-types of design, one on each side of the tray, was made by a youngster, superior in intelligence who did well in school, but who was regarded by the first and third grade teachers as slightly unstable. There was considerable tension in the home life of this child owing to the instability of the father, a brilliant but erratic individual.

Conclusions: Although our number of cases is too small for adequate generalization, the following trends were apparent:

1. Within the "normal" group and after pre-school age, intelligence apparently plays little part in the type of mosaic made.

2. Approximately half of the children used the edge of the tray in some way. Since it has been found that edging seems to indicate a dependency need, such a finding would seem normal in a six year old group. Only when the use of the edge is unusual (as in certain designs), does it seem indicative of more than the usual immaturity of this age group.

3. More than half of our youngsters made representational patterns (the majority of which were houses or scenes with houses) while one-fifth made designs.

4. A pre-fundamental pattern made by a six year old child is indicative of some type of maladjustment.

5. The hollow-circle pattern seems to indicate feelings of what Dr. Lowenfeld describes as "emptiness." This goes along with the findings on English children.

6. Children 'making rigid, stereotyped patterns which cover much or all of the tray show evidence of personality difficulties.

7. Children who make freer patterns which cover much or all of the tray but contain elements of good organization are apt to be adequately adjusted youngsters.

8. "Primary system" houses at this age are probably made by the more immature child.

9. Well constructed houses with details which include adequate doors and windows are apt to be made by the better adjusted children.

10. Dysphoric feeling tone in the mosaic is a danger-signal.

11. The subjects who made miscellaneous objects were, on the whole, the brighter, better adjusted children who seemed to have no need to project personality difficulties.

12. Designs, whether symmetrical or not, if made toward the center of the tray, usually indicated the better adjusted child while those which clung to the edge seemed symptomatic of immaturity.

13. In comparing the present findings with those of English children, it continues to be evident that the American boy and girl is much more apt to be concrete, or representational in his mosaic and less apt to make the symmetrical design so common with the English child.

Received April 9, 1954

Psychosexual Identification In Paranoid Schizophrenia

ABRAHAM M. ZEICHNER
Connecticut State Hospital[1,2]

The etiology of paranoid schizophrenia has, as a result of psychoanalytic theory and practice, been linked to the psychosexual development of the individual involving specifically latent homosexuality or conflicts over homosexual wishes. Adherents to this point of view have posited a causal relationship between the homosexual components and the paranoid syndrome (4, 15; 5, pp. 387-470). Some writers have been more guarded in considering the relationship between homosexual conflicts and paranoid syndromes as involving causality in most, let alone all, cases manifesting paranoid defense patterns. Deficiencies in role taking and impaired social growth (3, pp. 442-443), disturbances of security such as early traumata, impaired self-esteem, frustrated ambitions, feelings of inadequacy, etc. (21, p. 401) have been cited as dynamic factors in the development of paranoid reactions.

Norman, who concluded in his study that there is much evidence for ascribing strong conscious and unconscious homosexual trends to paranoid patients, expressed the view that, "There is no proof, however, that these homosexual tendencies are a primarily etiologic factor in the schizophrenic process" (20, p. 489). Aronson (1), who studied the occurrence of "homosexual signs" on the Rorschach in paranoid patients, also concluded that although the results supported the Freudian hypothesis, they did not prove an etiological relationship between homosexual conflicts and paranoia.

The question may be raised whether the attempts to demonstrate the occurrence of homosexual trends in paranoid subjects at the descriptive level can lead to conclusions concerning etiology. Perhaps, it is necessary, rather, to investigate the dynamic aspects of psychosexual development so that a clear understanding of the etiology of specific variations within the broad range of patterns of human adjustment may eventually emerge through research.

Upon examining the fundamental elements in the emergence of personality, particularly with respect to the development of the individual's social role, the process of identification may be found to play a major part. Homoeroticism and its variations in all aspects of behavior in males have been analyzed in terms of the identifications experienced by the individual in the process of psychosexual development, specifically identification with the mother (2, 6, 8, 10). Thompson (24) observed that the one ubiquitous feature in homosexuality, whether it be passive or active types, is the identification with the mother and the consequent adoption of love attachments consonant with a feminine role.

Specifically with respect to schizophrenia, Gerard and Siegel (7, p. 67) reported that confusion of sexual identification constitutes one of a number of characteristics in the family

[1] This article is based on a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of Education of New York University. Grateful acknowledgments are due to the Chairman of the sponsoring committee, Professor Brian E. Tomlinson, and to the other committee members, Professors Bernard N. Kalinkowitz and Frederic M. Thrasher.

[2] Acknowledgments for their generous cooperation are due to Dr. Jules D. Holzberg, Director, and Professor Murray Wexler, Department of Psychology, State University of New York; Professor Robert H. Knapp, Wesleyan University; Drs. Robert S. Morrow and Seymour G. Klebanoff, of the Veterans Administration.

background of schizophrenics that are contributory to their pathological personality development. Reichard and Tillman (23) found that in seventy-six per cent of seventy-nine male schizophrenics the mother was the dominant parent. Klein and Horwitz (13, p. 700) reported that for seventy-five per cent of the forty male paranoid cases they studied, the mother was the prime love object. Kasanin et al (12) reported overprotection as a characteristic pattern among the mothers of schizophrenic individuals, and concluded that this interfered with the child's emancipation from the mother and prevented the emergence into a mature psychosexual role.

Statement of the Problem

Consideration of the literature concerning the relationship between psychosexual identification and homoeroticism, and the implications of this relationship to the development of paranoid patterns of adjustment, gives rise to a specific problem. How will a group of paranoid schizophrenics resemble or differ from a group of "non-paranoid" schizophrenics and a group of normals with respect to psychosexual identification? It is hypothesized that:

1. The p a r a n o i d schizophrenic group will show more confusion with regard to psychosexual identification, and will tend to identify more with the female figure, than the normal group.

2. Whereas both the paranoid schizophrenic group and the non-paranoid schizophrenic group may exhibit confusion with regard to psychosexual identification, the paranoid group will show greater tendencies toward feminine identification.

Subjects

The thirty schizophrenic subjects of this investigation were male veterans of World War II, selected from patients hospitalized in Veterans Administration Hospitals. The diagnostic categories accepted were determined by the final psychiatric staff diagnosis, in turn based upon a psychiatric mental status examination, psychological testing, and a social history of the individual and his family background. Patients with complicating diagnostic features, such as epilepsy, alcoholism, or neuropathy, were not utilized. Patients with history of overt homosexuality were also not included, in order to keep from introducing the very variable being searched for, i.e., feminine identification, into the data. The fifteen normal subjects were selected from the surgery wards of Veterans Administration Hospitals. They were screened for neuropsychiatric involvement with the Cornell Index (25). Their hospital records were inspected in order to ascertain the nature of their hospitalization. Finally, they were interviewed to rule out a history of neuropsychiatric disorder.

The fifteen patients comprising the experimental group consisted of individuals who were diagnosed schizophrenic reaction, paranoid type. The "non-paranoid" control group consisted of eight catatonics and seven hebephrenics. The normal controls consisted of six patients with pilonidal cyst, and nine with hernia. All of the normal subjects were post-operative. The mean ages were: paranoids 32.60 years, non-paranoids 30.20, and normals 31.27. The three groups did not differ significantly in statistical comparisons with respect to age. The groups were equivalent also in terms of the highest school grade completed. The means were: paranoids, 11.40, non-paranoids 11.43, and normals 11.87.

Procedure

The tests used for this study were the Rorschach Psychodiagnostic Test and the Thematic Apperception Test.

I. *Rorschach Psychodiagnostic Test.* The administration of the Rorschach was oriented towards obtaining con-

tent and human movement responses in order to make it possible to examine the subjects' attitudes as they pertain to psychosexual identification and concept of sexual role.[3] The first step was the administering of the Rorschach Test in the manner prescribed by Klopfer and Kelley (14). The second step consisted of Testing the Limits for Sex as described by Pascal *et al* (22). The third step was Testing the Limits of Movement, a modification of Testing the Limits for Sex, and designed to elicit additional movement responses with inquiry as to the type of movement and sex of the person or persons perceived. Human movement responses and content pertaining to humans and sex relevant to this report were classified as follows and a tally made to obtain frequency of occurrence.

1. Male Percepts
   (a) Figures: human, mythological, animal, caricature, anatomy;
   (b) Objects: clothing, ornaments.
2. Female Percepts
   (a) Figures: human, mythological, animal, caricature, anatomy;
   (b) Objects: clothing, ornaments.
3. Ambiguous Percepts
   (a) Symmetrical figures, one of which is seen as male and the other as female;
   (b) Figures seen as capable of being either male or female;
   (c) Unspecified.
4. Testing the Limits for Sex
   (a) Male organs;
   (b) Female organs;
   (c) Male and/or female organs.[4]
5. Movement Responses in Male Figures
   (a) Homosexual movement;
   (b) Heterosexual movement.
6. Movement Responses in Female Figures
   (a) Homosexual movement;
   (b) Heterosexual movement.

In order to test the reliability of the investigator's classification of the responses, a qualified clinical psychologist was asked to classify the responses independently. There was complete agreement on the straightforward content categories, sex responses, and the homosexual and heterosexual movement responses.

The following specific predictions were derived from the basic hypotheses with regard to the Rorschach findings:

1. The paranoid group will produce more responses relating to feminine content, in proportion to responses dealing with masculine content, than either the normal or non-paranoid groups.

2. The paranoid and non-paranoid groups will produce more ambiguous content responses, in proportion to specific male and female content responses, than the normal group.

3. The paranoid group will produce more female sexual responses, in proportion to male sexual responses, than either the normal or non-paranoid groups.

4. The paranoid and non-paranoid groups will produce more ambiguous sexual responses, in proportion to specific male and female sexual responses, than the normal group.

5. The paranoid group will produce significantly more homosexual human movement responses than either the normal or non-paranoid groups.

II. *Thematic Apperception Test.* Thirteen cards were selected, because of the variety of figures and situations they portray. These cards were: 1, 2, 3BM, 4, 6BM, 7BM, 8BM, 10, 12M, 13MF, 18BM, 18GF, and 20. The contents of the stories obtained from the subjects were organized for analysis in the following manner:

1. Designation of the Sex of Figures
   (a) Accurate designation of the sex of figures;

[3] The present report is concerned with psychosexual identification. The data involving concept of sexual role will be reported separately.

[4] The responses: "Buttocks, could be man's or woman's;" "This looks like a man's (penis) also a woman's (vagina)."

(b) Uncertainty as to the designation of the sex of figures;
(c) Misidentifying the sex of figures.

2. Sexual Attitudes of Male Toward Male
(a) Guilt over homosexuality;
(b) Ambivalence toward homosexuality;
(c) Positive attitude toward homosexuality.

3. Sexual Attitudes of Male Toward Female
(a) Guilt over heterosexuality;
(b) Ambivalence toward heterosexuality;
(c) Positive attitude toward heterosexuality.

4. Sexual Attitudes of Female Toward Male
(a) Guilt over heterosexuality;
(b) Ambivalence toward heterosexuality;
(c) Positive attitude toward heterosexuality.

5. Sexual Attitudes of Female Toward Female
(a) Guilt over homosexuality;
(b) Ambivalence toward homosexuality;
(c) Positive attitude toward homosexuality.

As on the Rorschach, an independent judge was employed to test the reliability of the investigator's classification of the Thematic Apperception Test data. There was complete agreement in scoring the stories for Designation of Sex. Reliability between judgments was determined by calculating coefficients of contingency based upon chi square determinations. The latter were set up to check the null hypothesis that the agreement between the judges could have occurred by chance. The reliability coefficients were .83 for Homosexual Attitudes and .80 for Heterosexual Attitudes. Disagreements were settled by submitting the data to a third judge. The two scores out of the three which concurred were accepted as the final criteria for classifying the items in question.

The following specific predictions were derived from the basic hypotheses with regard to the Thematic Apperception Test results:

1. The paranoid group will make more misidentifications, in relation to accurate designations, than either the normal or non-paranoid groups.

2. The paranoid and non-paranoid groups will show greater uncertainty in the designation of sex of figures, in relation to accurate designations, than the normal group.

3. The paranoid and non-paranoid groups will depict guilt and ambivalence over heterosexual interest or activity, in relation to positive attitudes, to a greater extent than the normal group.

4. The paranoid group will produce more themes dealing with homosexual activity or interest than either the normal or non-paranoid groups.

Results

1. *Rorschach Psychodiagnostic Test.* The groups did not differ significantly from each other with respect to the ratio of male to female responses (Table I, Comparison A).

The non-paranoid group produced a significantly greater number of the combined sexually ambiguous responses, as compared with the total specific responses, than either the paranoid or normal groups; in both instances, at better than the .01 per cent level of significance (Table I, Comparison B). The paranoid group, however, was not significantly differentiated from the normal group with respect to this comparison. The male and/or female responses were combined with the male-female-symmetry responses for this analysis because of the very low frequency of responses in the latter category. For the comparison in question, this combination constitutes no injustice to the data. The psychological significance of the two categories in question is essentially the same, since they both represent responses in which identical areas

TABLE I—Comparisons of Paranoid, Non-Paranoid and Normal Groups on Content of Rorschach Responses

Comparison A. Total Male to Total Responses

Groups	Male	Female	Chi Square	Level of Significance
Paranoid	118	89	.21	.50-.70
Normal	58	39		
Paranoid	118	89	1.04	.30-.50
Non-Paranoid	35	35		
Non-Paranoid	35	35	1.58	.20-.30
Normal	58	39		

Comparison B. Male and/or Female Combined with Male-Female-Symmetry Responses to Total Specific Responses

	Male and/or Female and Male-Female-Symmetry	Specific	Chi Square	Level of Significance
Paranoid	20	207	1.02	.30-.50
Normal	5	97		
Paranoid	20	207	21.25	<.01
Non-Paranoid	28	70		
Non-Paranoid	28	70	20.32	<.01
Normal	5	97		

Comparison C. Unspecified Responses to Total Specific Responses

	Unspecified	Specific	Chi Square	Level of Significance
Paranoid	37	207	3.49	.06
Normal	29	97		
Paranoid	37	207	13.79	.01
Non-Paranoid	34	70		
Non-Paranoid	34	70	2.68	.10-.20
Normal	29	97		

Comparison D. Male Sex Responses to Female Sex Responses

	Male	Female	Chi Square	Level of Significance
Paranoid	40	81	5.37	.02
Normal	31	30		
Paranoid	40	81	3.73	.06
Non-Paranoid	36	41		
Non-Paranoid	36	41	.22	.50-.70
Normal	31	30		

Comparison E. Male and/or Female Sex Responses to Male Sex Responses

	Male and/or Female	Male	Chi Square	Level of Significance
Paranoid	11	40	4.03	.02-.05
Normal	1	31		
Paranoid	11	40	.34	.50-.70
Non-Paranoid	13	36		
Non-Paranoid	13	36	7.42	<.01
Normal	1	31		

on the Rorschach plate are seen as capable of being either male or female.

The paranoid group was differentiated from the normal group at the .06 level of significance, in the direction of a greater proportion of unspecified responses over total specific male and female percepts (Table I, Comparison C). The non-paranoid group produced a significantly greater number of unspecified responses as compared with total specific percepts than did the paranoid group, at bet-

ter than the .01 level. The non-paranoid group, though not decisively differentiated from the normal group, showed a trend toward a greater proportion of unspecified responses between .10 and .20 levels of significance.

The preponderance of female over male sex percepts which differentiates the paranoid group from the normal group is significant at the .02 level (Table I, Comparison D). The paranoid group was differentiated from the non-paranoid group, toward predominance of female sex responses over male sex responses, at the .06 level of significance. The non-paranoid group did not differ significantly from the normal group with respect to this comparison.

The paranoid and non-paranoid groups differed significantly from the normal group, with a greater proportion of male and/or female sex responses; the former at the .02-.05 level of significance, and the latter at better than the .01 level (Table I, Comparison E). The paranoid group was not differentiated significantly from the non-paranoid group with respect to this comparison.

The low frequency with which the groups produced homosexual human movement responses does not permit meaningful statistical comparison. The paranoid group, however, was responsible for all of the frank homosexual movement responses, a total of five. Neither the normal nor the non-paranoid group produced any homosexual movement responses.

2. *Thematic Apperception Test.* The question of identification of the sex of figures is applicable to those figures on the Thematic Apperception Test cards which lend themselves to uncertainty or misidentification. The criterion for accurate identification used in this study was the description of the figure concerned given in the TAT manual. Six of the cards used in this study contain figures which lend themselves to uncertain designation or misidentification of the sex of the figures: 3BM, 8BM, 10MF, 12M, 18GF, 20. If the figures on these cards were identified in accordance with the manual, the subject was credited with six accurate identifications. Each group, consequently, could have obtained a maximum of ninety accurate identifications.

Comparison A, Table II compares the groups with respect to the uncertain designations of sex in relation to accurate identifications. None of the determinations indicate significant differentiations. The same is true for the comparison of misidentification of sex in relation to accurate identification, as shown in Comparison B, Table II. However, in the former instance, the non-paranoid group was differentiated from the normal group at the .10-.20 level of significance, suggesting a trend toward greater production of uncertain designations, in proportion to accurate designations, by the non-paranoid group.

The paranoid and non-paranoid groups are each significantly differentiated from the normal group, at better than the .01 level, in the direction of greater frequency of themes involving guilt concerning heterosexuality over responses of positive attitudes (Table II, Comparison C). The paranoid group is not differentiated significantly from the non-paranoid group with respect to this comparison.

The paranoid and non-paranoid groups were differentiated significantly from the normal group, at better than the .01 level, in the direction of greater ambivalence with respect to heterosexuality over positive attitudes (Table II, Comparison D). The paranoid group did not differ significantly from the non-paranoid group with respect to this comparison.

Stories involving homosexual themes occurred primarily on cards depicting male figures. There were relatively few stories concerning homosexuality in which female figures were the principals. Comparison A, Table III compares the groups for total num-

TABLE II—Comparisons of the Paranoid, Non-Paranoid and Normal Groups on Designation of Sex and Heterosexual Themes on Thematic Apperception Test

Comparison A. Uncertain Designation of Sex to Accurate Designation of Sex

	Uncertain	Accurate	Chi Square	Level of Significance
Paranoid	8	73	1.50	.20-.30
Normal	4	78		
Paranoid	8	73	.01	.90-.95
Non-Paranoid	8	70		
Non-Paranoid	8	70	1.66	.10-.20
Normal	4	78		

Comparison B. Misidentification of Sex to Accurate Designation of Sex

	Misidentification	Accurate	Chi Square	Level of Significance
Paranoid	9	73	.13	.70-.80
Normal	8	78		
Paranoid	9	73	.49	.30-.50
Non-Paranoid	12	70		
Non-Paranoid	12	70	1.14	.20-.30
Normal	8	78		

Comparison C. Responses of Positive Attitude Toward Heterosexuality to Responses of Guilt Toward Heterosexuality

	Positive	Guilt	Chi Square	Level of Significance
Paranoid	20	41	15.18	.01
Normal	48	24		
Paranoid	20	41	.02	.80-.90
Non-Paranoid	16	31		
Non-Paranoid	16	31	12.18	.01
Normal	48	24		

Comparison D. Responses of Positive Attitude Toward Heterosexuality to Responses of Ambivalence Toward Heterosexuality

	Positive	Ambivalent	Chi Square	Level of Significance
Paranoid	20	30	14.27	<.01
Normal	48	16		
Paranoid	20	30	.13	.70-.80
Non-Paranoid	16	28		
Non-Paranoid	16	28	16.11	<.01
Normal	48	16		

ber of homosexual themes (guilt, ambivalence, and positive attitudes combined). The paranoid and non-paranoid groups produced significantly more homosexual themes than the normal group, being differentiated at better than the .01 level of significance, whereas the paranoid group did not differ significantly from the non-paranoid group. If the groups are compared on the basis of responses involving homosexuality in males, as in Comparison B, Table III, then the paranoid group may be seen to differ significantly from the normal and the non-paranoid groups, in case of the normal group at better than the .01 level, in case of the non-paranoid group, at the .02-.05 level. The non-paranoid group differed significantly from the normal group at better than the .01 level. Evidently, the data relevant to homosexuality in female figures when combined with the data concerning homosexuality in male figures change the picture with respect to the paranoid and non-paranoid groups. Comparison C, Table III

TABLE III—Comparison of Paranoid, Non-Paranoid and Normal Groups on Homosexual Themes on Thematic Apperception Test

Comparison A. Total Homosexual Themes

	Total Homosexual Themes	Chi Square	Level of Significance
Paranoid	34	21.56	<.01
Normal	5		
Paranoid	34	1.38	.20-.30
Non-Paranoid	25		
Non-Paranoid	25	13.34	<.01
Normal	5		

Comparison B. Male Homosexual Themes

	No. of Responses	Chi Square	Level of Significance
Paranoid	31	19.78	<.01
Normal	5		
Paranoid	31	4.08	.02-.05
Non-Paranoid	17		
Non-Paranoid	17	8.00	<.01
Normal	5		

Comparison C. Ratio of Male Homosexual Responses to Female Homosexual Responses in Paranoid and Non-Paranoid Groups

	Male	Female	Chi Square	Level of Significance
Paranoid	31	3	3.69	.06
Non-Paranoid	17	8		

compares the ratio of male homosexual responses to female homosexual responses that prevails between the paranoid and non-paranoid groups. The paranoid group produced a greater proportion of homosexual themes involving male figures, in contrast to the tendency on part of the non-paranoid group to produce themes involving homosexuality in female figures, at the .06 level of significance.

INTERPRETATION AND DISCUSSION OF RESULTS

In comparing the paranoid with the normal group with respect to the data pertaining to confusion in psychosexual identification, four out of seven determinations yielded statistically significant results (P = .05 or better). The non-paranoid group was differentiated in a like manner, four out of seven determinations being conclusively significant (P = .05 or better) with two of the seven indicative of trends in the predicted direction (P = .10-.20). In addition, the non-paranoid group was significantly differentiated from the paranoid group in two out of seven determinations (P = .05 or better). On the basis of these results, it may be concluded that the schizophrenic groups exhibited significantly greater psychosexual confusion than the normal group. In addition, though it was not initially postulated, the non-paranoid group revealed significantly greater confusion in psychosexual identification than the paranoid group.

With respect to feminine identification, the paranoid group was differentiated significantly from the normal group in three out of six determinations, (P = .05 or better) and also from the non-paranoid group in three out of six determinations (P = .06 or better). In addition, the non-paranoid group was differentiated significantly from the normal group, in the direction of greater feminine identification, in two out of six determinations (P = .01 or better).

Evidently, the hypothesis that the paranoid group would show signifi-

cantly greater feminine identification than the normal and non-paranoid groups is decisively demonstrated in relation to the paranoid and normal groups. The two schizophrenic groups, however, pose some problems. There is evidence to indicate that the non-paranoid group, as well as the paranoid group, reveals significantly greater feminine identification than the normal group. Then too, there is evidence to indicate that the paranoid group is more preoccupied with homosexuality in male figures than the non-paranoid group. Some order may be established if the total picture pertaining to psychosexual identification is integrated, and the issues of confused identification and feminine identification viewed as related aspects of sexual adjustment. London (17) observed that the schizophrenic individual has never reached the heterosexual level of development. Many schizophrenics are fixated at a psychosexual level that is more primitive than the homosexual one, whereas some schizophrenics attain the homosexual level. Since the results of this investigation reveal that the non-paranoid schizophrenic group exhibits greater tendencies toward confused psychosexual identification than the paranoid group, it may be postulated that the trend toward feminine identification represents an attempt at resolving the confusion on part of the paranoid individual, through a more clearly defined attempt at structuring his sexual role.

The presence of trends toward feminine identification in the non-paranoid group may be understood in the light of the conception of psychopathology which denies that an all or none principle applies either to the symptomatology or the dynamics of the various schizophrenic syndromes. As has been made clear in the literature (11, 19), the schizophrenic subtypes are not hard and fast delineations; rather, they are characterized by considerable overlapping of defenses and symptoms. From this standpoint, a paranoid schizophrenic may be viewed as an individual who utilizes certain defense mechanisms and adaptive patterns to a greater extent than a catatonic schizophrenic, but there may be an overlapping in this respect which would result in some similarities in personality, including psychopathology. Consequently, as the results of this study indicate, the paranoid group shows greater trends toward feminine identification than the non-paranoid group, but both the paranoid and non-paranoid groups reveal these trends to significantly greater degree than the normal group.

One of the specific areas, regarding feminine identification, in which the paranoid group was not decisively distinguished from the non-paranoid group, occurred on the Thematic Apperception Test. The paranoid group did not differ significantly from the non-paranoid group with respect to the total number of homosexual themes, involving female as well as male figures. It was determined, however, that the paranoid group was relatively more concerned with male homosexuality, and the non-paranoid group more concerned with female homosexuality. Lazell (16) observed that homoerotic trends occur in hebephrenic as well as in paranoid schizophrenics. He differentiated the homoeroticism that occurs in the two groups by postulating that the hebephrenic reaction represents incestuous wishes toward the mother, whereas the paranoid reaction constitutes a defense against the father. Extending this observation, it may be surmised that the hebephrenic might view homosexuality between females as one way of gratifying the wish for incestuous contact with the mother. It is noteworthy that four of the six non-paranoid subjects who produced homosexual responses involving female figures were hebephrenic. Research may further elucidate these matters.

A broader issue may be evoked by calling attention to the fact that, though there were significant differ-

ences between the schizophrenic groups and the normal group, the latter, nevertheless, produced responses involving psychosexual confusion and feminine identification. Also, there were paranoid subjects who failed to produce responses relevant to psychosexual confusion or feminine identification. With regard to the incidence of psychosexual confusion and feminine identification among the normal subjects, it may be postulated that the concept of the person encompasses virtually all roles, attitudes, and identifications, that in the normal individual the multiple trends are integrated into a more or less smoothly functioning organization. In the psychotic individual, various facets of the personality appear exaggerated in comparison with the rest of the person. In response to conflict, various aspects of identification, or other dynamisms, assume dominance and make excessive demands upon the individual's total energy distribution, thereby effecting an imbalance in the individual's adjustive capacities.

Summary

The problem of this study was to compare a group of fifteen paranoid schizophrenics with a group of fifteen non-paranoid schizophrenics and fifteen normals with respect to psychosexual identification. It was hypothesized that the paranoid schizophrenic group would show more confusion with regard to psychosexual identification, and will tend to identify more with the female figure, than the normal group. It was also hypothesized that whereas the paranoid schizophrenic group and the non-paranoid schizophrenic group may exhibit confusion in psychosexual identification, the paranoid group would show greater tendencies toward feminine identification. The Rorschach and selected cards of the Thematic Apperception Test were used.

The evidence indicates that the paranoid group displayed greater confusion in psychosexual identification than the normal group, four out of seven chi square determinations yielding results significant at the .05 level or better and one at the .06 level. The non-paranoid group likewise displayed significantly greater psychosexual confusion than the normal group, four chi square determinations out of seven yielding results significant at the .05 level or better and two determinations out of the seven indicating trends at the .10-.20 level of confidence. In addition, the non-paranoid group differed at the .05 level or better from the paranoid group in two out of seven determinations, indicating greater psychosexual confusion on part of the former.

The direction of identification of the paranoid group in comparison with the normal group was significantly more feminine, three out of six chi square determinations yielding results significant at the .05 level of confidence. The paranoid group differed significantly, at the .06 level of confidence or better from the non-paranoid group in three out of six chi square determinations in the direction of greater feminine identification. In addition, the non-paranoid group differed significantly from the normal group, at better than the .01 level, in two out of six chi square determinations in the direction of greater feminine identification. The implications of the results were discussed.

References

1. Aronson, M. L. A study of the Freudian theory of paranoia by means of the Rorschach test. *J. proj. Tech.*, 1952, *16*, 397-411.

2. Burrow, T. The genesis and meaning of homosexuality and its relation to the problem of introverted mental states. *Psychoanal. Rev.*, 1917, *4*, 219-233.

3. Cameron, N. *The psychology of behavior disorders.* New York: Houghton Mifflin Co., 1947.

4. Ferenczi, S. *Sex in psychonalysis.* New York: Robert Brunner, 1950.

5. Freud, S. *Collected papers,* Vol. III. London: Hogarth Press, 1948.

6. Freud, S. *Group psychology and the analysis of the ego.* London: Hogarth Press, 1948.

7. Gerard, D. L. and Siegel, J. The family background of schizophrenia. *Psychiat. Quart.*, 1950, *24*, 47-73.

8. Hart, H. H. Problems of Identification. *Psychiat. Quart.*, 1947, *21*, 274-293.

9. Henderson, D. K. and Gillespie, R. D. *A textbook of psychiatry*. New York: Oxford University Press, 1947.

10. Hendrick, I. *Facts and theories of psychoanalysis*. New York: Alfred A. Knopf, 1939.

11. Jenkins, R. L. Nature of the schizophrenic process. *Arch. Neurol. Psychiat.*, 1950, *64*, 243-262.

12. Kasanin, J., Knight, E., and Sage, P. The parent-child relationship in schizophrenia: I. overprotection-rejection. *J. nerv. ment. Dis.*, 1934, *79*, 249-263.

13. Klein, H. R. and Horwitz, W. A. Psychosexual factors in the paranoid phenomena. *Amer. J. Psychiat.*, 1949, *105*, 697-701.

14. Klopfer, B. and Kelley, D. M. *The Rorschach technique*. New York: World Book Co., 1946.

15. Knight, R. P. The relationship of latent homosexuality to the mechanism of paranoid delusions. *Bull. Menninger Clin.*, 1940, *4*, 149-159.

16. Lazell, E. W. The group treatment of dementia praecox. *Psychoanal. Rev.*, 1921, *8*, 168-179.

17. London, L. S. *Libido and delusion*. Washington, D.C.: Mental Therapy Publications, 1946.

18. Marcondes, D. Relaciones de objeto en la paranoia masculina y feminina. *Rev. Psicoanal.*, B. Aires, 1947, *4*, 492-507.

19. Muncie, W. *Psychobiology and psychiatry*. St. Louis: C. V. Mosby Co., 1939.

20. Norman, J. P. Evidence and clinical significance of homosexuality in 100 unanalyzed cases of dementia praecox. *J. nerv. ment. Dis.*, 1948, *107*, 484-489.

21. Noyes, A. *Modern clinical psychiatry*. Philadelphia: W. B. Saunders Co., 1948.

22. Pascal, G. R., Ruesch, H. A., Devine, C. A., and Suttell, B. J. A study of genital symbols on the Rorschach test. *J. abnorm. soc. Psychol.*, 1950, *45*, 286-295.

23. Reichard, S. and Tillman, C. Patterns of parent-child relationships in schizophrenia. *Psychiatry*, 1950, *13*, 247-258.

24. Thompson, C. Changing concepts of homosexuality in psychoanalysis. *Psychiatry*, 1947, *10*, 183-189.

25. Weider, A., Wolff, H. G., Brodman, K., Mittelmann, B., and Wechsler, D. Cornell Index, Form N-2, Manual, 1949, p. 8.

Received January 11, 1954

BOOK REVIEWS

Ames, L. B., Learned, J., Metraux, Ruth W., Walker, R. N. *Rorschach Responses in Old Age.* New York: Hoeber-Harper, 1954. 229 + v.

This book is another volume in a series presented by the Gesell Institute of Child Development and deals with the much needed area of norms in the Rorschach technique. This volume which is concerned with the responses of subjects in the age range 70 - 100 is organized somewhat differently from the first volume dealing with child Rorschach responses. Instead of presenting the material around age levels, the material is grouped around normal, presenile, and senile responses, and various comparisons within this framework. Although continuation of the original format has certain advantages, the format used in this volume is better suited to the age level with which the investigators were working. Two-thirds of the population were institutionalized individuals. This does present some question as to the representativeness of the sampling. The investigators analyzed the data to determine the possible differences between the two groups and found that "A much larger proportion of the non-institutionalized members of the pairs is classed as normal; many more of the institutionalized cases as senile." They then proceed to work with the total group as if the sampling bias were not present. The age classification was eliminated because they found so many subjects at varying ages had records that were as rich as those of much younger people with whom aging could not be considered an important factor. The data lent themselves more suitably to the organization around normal, pre-senile, and senile. This classification also reduced somewhat the problem of biased sampling. However, this solution still leaves open to question whether this group with its distribution of 41 in the so-called normal category, 140 in the pre-seniles, and 19 in the seniles is representative. In the normal group half were institutionalized and half non-institutionalized but in the two other groups more than two-thirds were in institutions. Some of the comparative measures given might be open to question. However, the presentation of the collection of this much needed material, even if only for use of the non-comparative data, is a most worthwhile and useful work. The book is neatly organized so that its use as a reference text is most convenient. There are sections on statistical presentation of results, attempts to structure the collective personality as represented by the Rorschach responses, and sample records with extremely brief interpretations.

This reviewer has much question about the suitability of using the mean or presentation of the determinants as organized at the beginning of each classification, a procedure used in the previous publication also. To indicate that .1 C or .3 FC is typical for a group is suggestive of slavish adherence to statistics without recognition for the fact that these results have no real meaning. It may be that for some groups it is not possible to present some findings but certainly it would be more meaningful to state simply as is done in Table 10 that 52% of the group use M's or perhaps that 75% of the group use 1 M and 25% 2 M's and so on.

A second question which this reviewer would raise is the basis for the decision to use a European form of scoring. The investigators mention their awareness that this is a form of scoring unfamiliar to the majority of American workers but nevertheless follow it. The use of a foreign scoring method in an American publication not only means the introduction of another scoring scheme to the American scene but it means a reduction in

the usefulness of their data in this country. Without the original data even those hardy souls who would attempt the translation, are unable to do so.

In the analysis of the data, the authors present a number of guides for distinguishing the normal, the pre-senile, and the senile. They indicate that there is not only a difference in frequency of certain signs but a gestalt difference as well. A cross-validation would seem a most desirable step at this point to insure the accuracy of the conclusions especially in view of the possible biased sampling.

All taken into account, this series of publications needs to be studied thoroughly by every serious Rorschach worker. It is to be hoped that the authors' investigations will not stop with this series but will proceed to the next and vital step of examining the relationship between these findings and prediction, since even within this presentation, interpretations are made as if the psychological significance of the findings had been as carefully evaluated as are the normative data presented.

MORTIMER M. MEYER
Los Angeles Mental Hygiene Clinic
Regional Office, Veterans Adm.

Cunningham, Dax E. *Experimental studies in psychiatric art.* Philadelphia: Lippincott. 1953, pp. 100.

This book offers a concise statement of observations based on extensive experience in the use of painting and music as therapeutic aids in a psychiatric hospital in England. Fifty-one black and white reproductions, besides a colored frontispiece, enliven the discussion. The factual account of the development of the program, and of the present organization of the painting studio in the hospital, will be of interest especially to those who face practical problems in this area. There is an informed and unpretentious discussion of the diagnostic and therapeutic possibilities of these art media. However, if one expects, from the first word of the title, to find any systematic testing of hypotheses, one must be largely disappointed. Here, the word "experimental" must be read as little more than "exploratory." Although the author recognizes the need for statistical comparison of experimental and control groups, such comparisons, and quantitative summaries of any sort, are (with one exception) absent. Examples are admittedly chosen for clarity from the supply of more than twenty thousand paintings which provide the background for these studies.

However, there is one notable instance in which experimental control, in the stricter sense, and adequate statistical treatment of the resulting data, seem to have been employed: in studying the differential characteristics of paintings produced after listening to different types of musical stimulation. Although the method is presented as an indirect means of assessing the influence of music, we may also welcome it as a technique for reducing the excessive variability in painting production, which ordinarily makes the latter so difficult to interpret. Unrecognized music is a form of stimulation which has feeling tone but minimal associational content, and which may therefore give a direction to projective expression without the reduction of individual spontaneity which would come from setting a theme. Thus, in response to Mendelssohn's "Overture to a Midsummer Night's Dream," thirteen of seventeen patients painted "crises" with widely varying content, and in response to Bliss's "Rout," ten of eighteen patients painted exotic foreign scenes, which were yet so varied as to literally represent the four corners of the earth: Europe, Asia, Africa, and America. Under these conditions, the sharply deviant productions of several patients suffering from various forms of cerebral injury became especially conspicuous, although they "might have been passed among the

very ordinary in other circumstances." The suggestion that painting may be used to investigate psychological recovery processes following leucotomies and head injuries, and that the concurrent use of standardized musical stimulation may sharpen the outcome of such study, is certainly worthy of careful testing.

SOLOMON DIAMOND
Los Angeles State College

Hiltmann, Hildegard; Lossen, Heinz; Muchow, Brigitte; and Wewetzer, Karl-Hermann. *Verlaufsanalyse in der Psychologischen Diagnostik.* (Sequential analysis in psychological diagnosis.) Bern: Hans Huber, 1953, 142 pp., SFr. 13.80.

This monograph, consisting of four separate but related papers, was published in honor of the 50th birthday of Professor Dr. Robert Heiss, Director of the Psychological Institute of the University of Freiburg and one of the leading German advocates of projective techniques in personality theory and research. The contributions are in the nature of a progress report and a working knowledge of the methods and approaches used at Freiburg is assumed.

The subtitle, "The assessment of dynamic personality structures in the Rorschach, Color Pyramid Test, and Handwriting," summarizes the intent of the monograph. Lossen describes the stimulus qualities of the individual Rorschach plates and suggests how interaction with the environment may be predicted from sequential analysis of responses. He illustrates his thesis by interpreting the test protocols and handwriting samples of two adolescents. Muchow discusses the predictive potential of qualitative and quantitative Rorschach data, based on a study of 40 artistically gifted 10 to 13 year old children. The papers by Wewetzer and by Hiltmann deal with the Color Pyramid Test, which has not been extensively described in English language publications. Wewetzer asked 100 college students, roughly divided by sex, to complete nine color pyramids instead of the usual three. Shifts in color selection from one pyramid to the next are charted, graphed, and analyzed. Satiation was frequently noted after completion of the sixth pyramid. Hiltmann comments on results obtained when the color pyramid test is repeatedly administered over a period of time. She also reports technical data based on the original normative test population of 300 subjects.

There is a good deal of emphasis in these contributions on the pioneering work and leadership of Heiss. Although initially an exponent of graphology he eventually broke with the static, fixed concept of personality traits long espoused by Klages. The approach to personality as a changing, dynamic process has only recently been gaining wider acceptance in Germany. The purpose of the Freiburg papers is to find means not only of understanding but also of predicting behavior, or more precisely, of assessing the potentialities for change. These goals are not very different from the aims of American clinical psychologists and further exchange of information would certainly be desirable. The technical nature of the present papers, however, limits their value for translation.

HENRY P. DAVID, PH.D.
University of Pittsburgh
School of Medicine

Libo, Lester M. *Measuring Group Cohesiveness.* Ann Arbor, Michigan: Institute for Social Research, University of Michigan, 1953, 111 pp.

Coming out of the Research Center for Group Dynamics at the University of Michigan, the studies described in this little volume form part of a broader program in methodological research. This report includes a discussion of the concept of "attraction-to-group" or "group attractiveness," methods for its experimental manipulation, and methods for its measurement. A neat experiment is described,

and the presentation is orderly and systematic. It suggests many practical implications and raises provocative questions.

In earlier studies involving measurement of group cohesiveness, the unit of analysis has been the individual group member rather than the group. This investigation proceeds on the assumption that there is a correspondence between the needs of individual members and the potential of the group to satisfy those needs. Thus it undertakes to manipulate experimentally in a laboratory situation some of the variables which make for high and low group "attractiveness" and then to measure the results by three methods: a behavioral criterion called the "locomotion measure," a projective device called the Group Picture Impression (or G-P-I) technique, and a brief paper-and-pencil questionnaire.

Subjects were recruited from various classes in the social, biological, and physical sciences at the University of Michigan. The total number of subjects was 208. Each volunteer was asked to indicate on a form the hours at which he would be available to participate in a newly formed discussion group which was to serve both as a research and "club" setting. He indicated also the discussion area of his choice. All subjects preferred as the area of discussion "Case Studies in Human Relations"; none preferred "Accident Prevention." Experimental groups consisted of from 4 to 8 persons, all of the same sex and strangers to each other. Assignment of a subject to one of the experimental treatments was made in accordance only with his schedule of free hours. In all other respects it was random.

The high attractiveness condition was produced by manipulating three factors: (1) the preferred activity or area of discussion, (2) representation of the group members as "congenial" and "attractive" (by instructions and suggestions of the experimenter), and (3) prestigeful suggestions about the task, that is, information that important professional groups were interested in their discussion and opinions. The low attractiveness condition was produced by confronting the subject with a group in which none of these characteristics was present.

Immediately after the discussion period, the experimenter explained at some length the possibility of a continuing club program if the subject so desired, stressing the voluntary nature of membership and the necessity for the decision to be based solely on considerations of his own benefit. Then the three "cohesiveness" measures were introduced. A brief questionnaire with questions about the desire to remain a member of the group, the preferred frequency of meetings, etc., was presented first, as an item of business. Then the GPI Projective technique was introduced as a research activity. The real purpose of the technique was not known to the group. Following the administration of the GPI, the behavioral criterion or "locomotion measure" was used. This procedure gave the subjects an opportunity to express their decisions about staying with the group or leaving it by choosing, unobserved, one of two small rooms. On the door of one was the label "Checkout Room," on the other "Meeting Room."

Since the locomotion criterion provided an overt behavorial indication of attraction-to-group, it was used to determine the effectiveness of the experimental manipulation. Of the subjects in the high attraction group, 67% went to the Meeting Room; in the low condition only 24%, a difference significant at the .01 level. Both questionnaire scores and scores on the projective measure also showed significant differences between the high and low attraction groups and were hence found to be valid measures of attraction-to-group. They were significantly related also to the locomotion criterion and showed a low but positive correlation (.34) with each other.

The Group Picture Impression (GPI) technique will be of special interest to readers of this journal and two of the four chapters in the book are devoted to a description of it and to a Manual for its interpretation. It is regarded by the author as an extension or enlargement of the potential measurement applications of projective approaches. It is an attempt to capitalize on the "sensitivity" of the projective instrument to social factors in the test administration situation. Group-administered, it is a three-picture technique, eliciting short stories which can be coded and scored with high reliability and which yield a score for each member of the participating group. The score is reported in two parts: (a) the total score, and (b) the number of stories with a score, the latter representing presumably the subject's degree of involvement with the story-writing task and thus serving as a kind of screening device to indicate the validity (or invalidity) of the total score.

In the appendix the author himself raises the question which must necessarily bedevil the reader: what of the validity of the assumption that the story is a direct reflection of the subject's attraction to membership in the group of which he is now a member? How would the individual respond in isolation from any group? Are the stories tapping permanent and basic attitudes toward group relationships rather than reactions toward the immediate group situation? The type of investigation necessary to answer these questions has not yet been attempted with G-P-I, but it badly needs doing. Furthermore, although re-test reliability of the G-P-I is low, a study of the relation of changes in an individual's score to changes in group conditions has not been attempted.

There is something rather arbitrary, and sometimes questionable, about the determination of the code-able unit in scoring the GPI stories. But this is a minor detail. More important is the fact that this approach is a novel and promising one in the investigation of group behavior and should lend itself, with some modifications, to the study of many other group situations, particularly of group therapy processes.

RUTH TOLMAN

Roe, Anne. *The Making of a Scientist.* New York: Dodd, Mead, and Co., 1953.

This is an era in which scientists have been thrust by international exigencies into a new social role with heightened social responsibility and power. The interest and awe with which they are viewed by lay persons are mingled often with suspicion, fear, and hostility. In such a setting Dr. Roe's book is a timely offering which may in some measure correct in the direction of reality popular misconceptions about scientists as people.

She commences her book with a personal and engaging account of her goals and the vicissitudes of carrying out her several studies. She maintains throughout her book an atmosphere of objectivity, humility, and humanism that cannot fail to give to lay readers a good feeling about at least one psychologist.

Her scientists are 64 biologists, physicists, psychologists and anthropologists rated by their peers as eminent in their respective fields and her data are their life histories as obtained through intensive interviews, an especially constructed intelligence test, and the Rorschach and Thematic Apperception Test. In separate chapters she treats her findings in terms of the groups themselves, their selection and problems arising in examining them, their social and family backgrounds nicely rounded out with anecdotal data, occupational consistencies and differences in intelligence and imagery, and personality evaluations as obtained from the projective tests.

Of the many provocative findings, some stand out as of particular importance to those interested in the interrelations of occupational choice and

personality. The author has demonstrated clearly that the occupational choices of these scientists were imbedded in the entire pattern of their existence. For example, she finds vocational doubt, guidance, and conscious planning to be conspicuously absent. Their vocational selection proved to be non-rational, non-conscious expressions of basic psychologic needs having roots in early family relationships and a fulfillment of the whole process of psycho-social maturation. This reviewer should have liked to see an extrapolation of such findings to the occupational choice on the part of less eminent persons in whom similar determinants appear to exist.

Similarities in ontogenetic data and occupational selection prove to be congruent with projective test findings. Eminent social scientists manifest in the Rorschach and TAT greater concern with people, greater involvement with them, more open emotional problems, greater emphasis on verbal skills and emotional freedom, whereas biological and physical scientists reveal more comfortable independence from interpersonal involvement, greater concern with non-personal objects, and greater intellectual control. These findings are consistent with psychoanalytic observations on the part of such persons as Fairbairn, Sharpe, and Kris.

Attainment of eminence in these disciplines seems to have been a matter of more than a single generation, re-emphasizing the significance of early experiences in ego-formation. The families of these men held curiosity and intelligence in high esteem and permitted their exercise and implementation to occur with minimum conflict, hence with adult freedom. It is as if the aptitudes which they early demonstrated were inextricably interwoven with motivation, as if aptitude and interest were completely congruent and lacking the conflict which might have led to faulty appraisal of ability or compensatory exaggeration of interest. Consequently, for them the popular distinction between work and play was meaningless. It would be interesting to speculate whether equally intelligent scientists of lower stature might not manifest less consistency and single-mindedness and greater conflict in the prosecution of their occupational activities. Here is real evidence that successful work is sublimation rather than reaction formation.

Dr. Roe's presentation overcomes unusually well the problem of communicating to the layman the intricacies of projective, personality, and scientific concepts. She presents material in tabular form so that it is understandable, a joy to the psychologist reader. At no point does she resort to vague or incorrect simplification, though in rare instances she becomes too technical for her probable audience of readers of above-average education and intelligence. At other times she frustrates the technical reader because of her apparent reluctance to generalize beyond her data. While the evident goal was to communicate to a lay audience, there is much in her synthesis of research findings to reward the professional psychologist.

BERTRAM R. FORER
Veterans Administration
Mental Hygiene Clinic,
Los Angeles

Witkin, H. A., Lewis, H. B., Hertzman, M., Machover, K., Meissner, P. B., and Wapner, S. *Personality Through Perception: an experimental and clinical study.* New York, Harper, 1954, xxvi+571.

The reviewer approached this volume with keen anticipation. To him, it was the sequel to the senior author's earlier work on individual and sex differences in the perception of the vertical. The initial thumbing-through of the pages suggested that at long last here was a series of well-controlled experiments which would demonstrate some of the intrapersonal mechanisms operative in perceptual behavior. The frequent appearance of correlation coefficients of the mag-

nitude of .6 whetted the reviewer's interest, inviting a thorough and intensive reading of the entire book.

Careful scrutiny and study of the contents, however, left the reviewer saddened and disappointed. Because of the careful attention to detail and scientific precision in the development and administration of the perception measures (Chaps. 1-9), one is led to expect the same thoughtful application to problems of design, to selection of personality test instruments and variables, to the legitimacy of statistical operations, and so on. The report gives the reader the impression that concern with experimental design was delayed until after the data were assembled, that the choice of personality variables was post hoc, and that any penetrating questions as to reliability and validity of personality measures were cavalierly dismissed. And, because this volume is supposed to unify perception and personality into a comprehensive theory, the most important deficiency is the attempt to force the findings into a vague theoretical schema which is continuous with the operations of the experiment only by the use of tortuous analogies and weak metaphors.

The first half of the book establishes two propositions: There is self-consistency in the manner in which subjects rely on visual or bodily cues in tests of spatial orientation; and there are some correlations with age, suggesting a developmental factor. Wide individual differences, of course, are observed, some subjects relying almost exclusively on visual cues in their perception of space and others relying on postural cues. The sex differences are striking; women appear to rely more upon visual cues, and men upon postural cues. Although one might legitimately question the equating of dependence upon visual cues with a cognitive disposition "passivity" and postural cues with "activity" or "the analytic attitude," the experiments and the logic of the "perception" half of the book are commendable.

It is when we examine, in the second half of the book, the attempts to find personality correlates of perceptual performances that the weakness of the enterprise is revealed. In the first place, personality is assessed *exclusively* by clinical inferences from interview material or from projective procedures. No use is made of empirically-validated objective tests. Nowhere is there an expressed rationale for this selection of projective over other procedures nor for the multiplication of projective tests. Ratings on five trait-syndromes from the clinical interview, a specially derived scoring system for the Rorschach, two ratings from 15 TAT protocols, and three variables on the Picture Drawing test are used as measures of personality. (For children, a play situation was used.) One suspects from the tone of the interpretations that somehow these tests assess the "deeper" levels of personality, those levels for which psychopathological terminology has come to be the natural language.

Each of the personality assessment techniques was analyzed by a specialist who made up variables to suit the needs of the experiment. It would require too much space even to sketch the procedures, but a word about the Rorschach will illustrate the approaches used in the other tests. The Rorschach was administered individually to each of the 52 males and 51 females in the basic study group (college students). Then the experimenter examined intensively the Rorschach records of the six males who scored high on the orientation tests (dependence upon visual cues) and the records of the six males who scored low (dependence upon postural cues). From this examination, differences between the two groups were identified on seven specially-designed Rorschach variables. At this point one wonders whether the intricate configurations which are subsumed under each Rorschach variable developed out of Rorschach theory or personality theory or out of attempts to find the mish-mash

of responses which differentiated the "active" from the "passive" perceivers.

The Rorschach variables were W, M, H, P, F, C, and A (anatomy). A subject was assigned the W score if he gave no more than three "adequate" W responses, *or* if 50 per cent or more of the W responses were inadequate or blot-determined. He was assigned the P score if he gave five or fewer popular responses (out of a possible 20). He was assigned the C score when, in general, his CF was twice as great as FC. (The three scores added together, WPC, made up a "coping" variable.) The subject was assigned the M score if he gave two or fewer human movement responses. The H score was assigned when the ratio Hd /H+Hd was .5 or greater. The subject was assigned the F score when his protocols satisfied one of two criteria: where F per cent was 60 or more; *or* where the sum of M and C was five or less. The A score was assigned if there were 3 or more Anatomy responses in records of less than 35 responses, and four or more if total responses exceeded 35. Because A, as scored, was found in low-index subjects (while the other six variables were found in high-index subjects) it is subtracted from the total Rorschach score.

Some of these variables were selected because they actually discriminated between the extreme groups; the interpretation is then of the *ad hoc* variety. Take the H score, for example. "This response is, to some extent, an index of degree of acceptance of the human body, and therefore, in part, a reflection of degree of self-acceptance . . . A predominance of human 'part' responses (Hd) over complete figure responses reflects some difficulty in acceptance of the body or the self." (p. 212.) The rational or empirical justification for regarding the H score as a measure of self-acceptance is lacking. The use of the W score "represents a low number of adequate whole responses, corresponding to a passive attitude toward Rorschach stimulus material or to a lack of control . . . in organizing impressions." (p. 208) This is indeed an arbitrary way of developing a Rorschach score for "organization." The sum of certain detail responses also reveals adequate organization (Beck's Z score), but this is not mentioned or utilized. Further, the assertion that the W score represents a passive attitude is not supported by reference to any independent empirical correlates.

The rationale for declaring WPC as "coping" and MHFA as "introspective" is unclear. Correlations between these combined scores and the orientation index are .58 for men and .36 for women on MHFA and .60 for men and .55 for women on WPC. It is noteworthy that a single Rorschach score, W, has biserial correlations with the orientation index of .68 for men and .53 for women. Further analysis would have doubtless shown that most of the variance in the criterion was accounted for by the single variable W. One is tempted to ask what the correlation would have been with a more widely-accepted Rorschach measure of organization, such as Beck's Z-score, or with another arbitrary measure, say; less than 5 adequate whole responses or more than 30 per cent blot-determined responses.

Some of the orientation variables and the Rorschach were administered to about 60 per cent of the original sample after a lapse of three years (p. 462). For the rod-and-frame test, the correlation with total Rorschach was .56 and .45 for men and women respectively. On the retest, these correlations dropped to .40 and —.15. The correlating tilting-room-tilting-chair test dropped from .60 and .62 to .35 and .31. This is not an impressive cross-validation. The authors report a second cross-validation on a group of dancers (p. 461) where the correlations for Rorschach and for Interview scores hold up rather well. Details of these cross validational studies however, are not provided.

A word about methodology is in order. The reviewer questions, except

for frankly exploratory studies, the procedure whereby variables are selected because they differentiate high and low scores on the to-be-selected dependent variables. If from a group of 52 subjects, one takes the six highest and the six lowest scorers on the perceptual tests and selects as personality variables those which discriminate these extreme subjects, he has a significant head start on a significant correlation. It would have been more legitimate to run the correlations on the remaining 40 subjects.

Although there is a disavowal of the various personality measures as adjustment variables, the conclusions are expressed in language which is most commonly used in clinical-psychological and psychiatric reports. In summarizing the correlations with the interview variables, the authors write, "specifically, the correlations indicated a tendency for field-dependent perceptual performers to lack insight, to repress their impulses, to be passive, to yield to their inferiority feelings, and to be tense. Subjects who successfully resisted the influence of the field tended to show self-awareness, to express their impulses directly, to be active, to deal with inferiority feelings in a compensatory way, and to show self-assurance." (p. 203-204) In a number of places throughout the second half of the book, the data suggested a hypothesis to the reviewer, i.e., in the basic group, the major variance is accounted for by a few deviant individuals who gave extreme scores on all tests—perceptual and personality alike.

This investigation does not start from an explicit theory. At least to this reviewer it appears that the theory was dictated by the findings. The findings, in turn, were conditioned by the use of variables drawn from projective test sources; and, as we know, most projective test variables have their origin in psychopathological and psychoanalytic theories. The circle is completed in the penultimate chapter where the authors relate their basic variable "activity-passivity" to Freud's notions of psychosexual development. Appropriate at this point is the question: What theoretical schema would have been introduced to explain perceptual-personality correlates if personality had been assessed by, say, the Strong Vocational Interest Blank, the MMPI, Self-ratings on adjective check lists, Thurstone's PMA tests, or by social attitude scales? This is not meant as a rhetorical question. It should have been asked and answered before the investigators irrevocably committed themselves to the exclusive use of projective procedures. Had such a critical step been taken, many of the causes for this reviewer's sadness and disappointment upon reading this potentially exciting work would have been eliminated.

THEODORE R. SARBIN
University of California

GENERAL NEWSLETTER

Schachter, M. Psycho-diagnostic de Rorschach et endocrinopathies. *Note e Reviste di Psichiatria,* 1954, 80, 3-14.

Rorschach data from 30 patients suffering from endocrinological disorders are compared with a control group.

Schachter, M. Étude d'un "Symptôme" Rorschachien Nouveau. *Anais Portugueses de Psiquiatria,* 1952, 4, 312-323.

Rorschach responses to blots held in other than the vertical, presented position are found to be correlated with aggressiveness or hostility. The author proposes a ratio describing the proportion of responses to the Rorschach to 'para' positions of the blots as an index of aggressivity.

Schachter, M. Étude des formes abrégées du test de Rorschach en neuro-psychiatrie quotidienne. *Anais Portugueses de Psiquitria,* 1953, 5, 26-38.

A theoretical examination of abbreviated forms of the Rorschach.

Ginsberg, A. M. Estudo comparativo dos resultados de alguman provas psicologicas aplicadas a um gruno de estudantes de medicina. *Arquivos Brasileiros de Psicotecnica,* 1954, 6, 7-12.

The author describes findings of projective and intelligence measures administered to a group of 30 medical students.

Laerum, I. "The sentence completion test-SCT." *Arquivos Brasileiros de Psicotecnica,* 1954, 6, 67-80.

An examination of the values of several American variants of the incomplete sentences technique.

Schachter, M. and Cotte, S. Psycho-diagnostic de Rorschach et épilepsie infanto-juvénile. *Annali di Neurologia* 1953, 59, 427-440.

Rorschachs of 40 young epileptics are compared statistically with a control group of nail-biters.

Schachter, M. and Cotte, S. Etude clinico-psychologique de six sujets atteints de plusieurs symptomes névrotiques associés. *Annali di Neurologia,* 1953, 59, 303-316.

This is a clinical study of six children suffering from left-handedness, nail biting, dysarthria, enuresis and masturbatory problems. *Diagnostic test results are discussed.*

Schachter, M., Cotte, S., and Roux, G. Contribution à l'étude du comportement anti-social de révolte chex les mineures adoptées. *Annali Neuropsichiatria e Psicoanalisi,* 1954, 1, 201-211.

Case history and projective data are used to implement a discussion of prostitution and gangsterism among adolescents adopted by older parents.

Szondi, L. Analisis del Yo y analisis del caracter. *Revista de Psicologia general y aplicada,* 1953, 8, 595-639.

A theoretical study of ego and character formation with reference to the Szondi.

Pinillos, J. L. and Brengelmann, J. La presentacion taquistoscopia de imagenes como prueba de personalidad. *Revista de Psicologia general y aplicada,* 1953, 8, 681-688.

Tachistoscopic presentation of objects was used to measure speed of perception among normal, neurotic, and psychotic subjects. Significant differences were found.

Cortada, N., de Cornala, V. P., and Scheiner, J. B. Padronizacao de uma prova projetiva. *Arquivos Brasileiros de Psicotecnica,* 1954, 6, 7-22.

Rosenzweig's Picture Frustration Test, translated into Portuguese, was administered to standardization sam-

ples in Brazil and the findings compared with those of several other countries.

Alvim, E. de F. and Cavalcanti, B. A aplicaçao do Psicodiagnóstico Miocinético na seleçao de candidatas a escolas de enfermagem e de auxiliares de enfermagem. *Arquivos Brasileiros de Psicotecnica,* 1954, 6, 23-38.

Mira's myokinetic test was used in the selection of students in nursing school. Norms for nurses were established.

ANNOUNCEMENTS

RORSCHACH TEST WORKSHOPS

The Department of Psychology, University of Chicago, announces its 1955 summer workshops in the Rorschach Test, to be conducted by Dr. S. J. Beck the weeks of July 11-15 and July 18-22. The basic processes in test evaluation will occupy the first week's workshop, and it will demonstrate full test interpretation. The second week will be devoted to problems of advanced clinical interpretation, exemplified by children in disturbed states and by adults in mild neurotic conditions. For information write to the Executive Secretary, Department of Psychology, The University of Chicago, 5728 South Ellis Avenue, Chicago 37, Illinois.

THE RORSCHACH WORKSHOPS—long established as annual features of the Western Reserve University Summer Session, are being extended this year to accommodate three separate groups, all under the direction of Marguerite R. Hertz, Ph.D., Associate Clinical Professor of Psychology, Diplomate in Clinical Psychology, American Board of Examiners.

WORKSHOP I

Introduction to the Rorschach Method

Lectures, demonstrations in the hospitals, supervised training periods. June 13-17 inclusive. All day sessions, one evening session. Admission limited to qualified psychiatrists, psychologists, research workers in these fields, to graduate students specializing in clinical psychology having at least a full academic year's study or the equivalent in a recognized university and with clinical or research experience in psychology, psychiatry or psychiatric social work.

WORKSHOP II

Intermediate Course in the Interpretation and Clinical Application of the Rorschach Method

Lectures, demonstrations in the hospitals, supervised training periods. June 20-24 inclusive. All day sessions, one evening session. Admission limited to professionally trained persons in psychology, psychiatry, psychiatric social workers who have had introductory courses in the Rorschach Method or its equivalent. Students in Workshop I may continue with Workshop II.

WORKSHOP III

Advanced Course in the Interpretation of Rorschach Records of Various Personality and Clinical Groups. Participants may submit records for study

June 27-July 1 inclusive. All day sessions, one evening session. Admission limited to professionally trained persons in psychology, psychiatry, and psychiatric social work, who have had at least one full year of experience with the Rorschach Method.

The fee for each Workshop is $40. One semester hour is credited for each Workshop in the cases of those who present a transcript of previous college record upon registration.

Your requests for application forms should be addressed to:

THE DIRECTOR OF ADMISSION
Western Reserve University
2040 Adelbert Road
Cleveland 6, Ohio

The Claremont Summer Session

1955 Workshops in the Rorschach method of personality diagnosis and other projective techniques: Directed by Bruno Klopfer, Ph.D.

Workshop A: The Rorschach method of personality diagnosis of children, jointly sponsored by the Childrens Hospital and Claremont summer session. July 11 to July 16, Childrens Hospital, Los Angeles, California.

This workship will be devoted to the study of the Rorschach technique as used with children. Planned for professional people who are competent in the use of the Rorschach, an opportunity will be given to examine and discuss Rorschach protocols of normal children and of children presenting various types of disorders.

Workshop B: The Rorschach method of personality diagnosis and other projective techniques. August 15 to August 27, Asilomar Conference Grounds, Pacific Grove, California.

Qualified graduate students accepted for the Workshops can obtain graduate credit on application.

Tuition: Workshop A: $30.00; Workshop B: $50.00. Combined fee for both workshops is $75.00.

Reservations for accommodations can be made at moderate rates.

For information and application, write to Dr. Bruno Klopfer, P.O. Box 2971, Carmel, California before June 15, 1955.

REGIONAL REPORTS

Northern California Division

PROGRAMS FOR 1954

March 25, 1954

Symposium: The Mosaic Test
Mrs. Hildegarde Berliner, Dr. Floyd Due, Dr. Christine Miller, Dr. Hal Sampson

June 3, 1954

Social Influences on the Behavior of Conformists and Non-Conformists
Dr. Richard S. Crutchfield

October 7, 1954

The Bender Gestalt Test
Dr. Robert Suczek

December 2, 1954

Symposium: Psychoanalysis, Psychology, and Projective Techniques
Dr. Elsa Frenkel-Brunswick, Dr. Daryl E. DeBell, Dr. Annaliese Korner, Dr. Robert L. McFarland

OFFICERS FOR 1954

Chairman: Dr. Suzanne Reichard

Secretary-Treasurer:
Dr. Merle H. Elliott

Council: Dr. Jules Grossman, Dr. Robert E. Harris, Dr. George Muench, Mrs. Jane Hamilton Ranzoni, Dr. William H. Pemberton, Dr. Paul Spitzer

Philadelphia Division

PROGRAMS FOR 1954-1955

October 29 and 30, 1954

Seminar: Critical Evaluation of Current Research with Special Emphasis on Studies with Adolescents and Adults
Marguerite Hertz

January 28 and 29, 1955

Seminar: Psychological Test Evaluation of Personality Change during Intensive Psychotherapy
Roy Schafer

February 25, 1955

Lecture: Psychological Findings in a Case of Cardiac Neurosis
Aaron T. Beck, M.D. and Sheldon R. Rappaport

March 25, 1955, 8:00 p.m.

Round Table Discussion: Differential Findings in Autistic, Schizophrenic and Brain-damaged Children
Rachel Cox, Olive Morgan, Sheldon R. Rappaport, Eleanor Ross, Marguerite Saltzman and Irving Schulman

April 29, 1955, 8:00 p.m.

Lecture: Childhood Schizophrenia
Zygmunt A. Piotrowski

Location of meetings:

Jefferson Medical College
Lecture Auditorium, Ground Floor
1025 Walnut St.
Philadelphia

Address payments to: Dr. Dorothy K. Hallowell, Treasurer, 3318 Midvale Ave., Philadelphia 29, Pa.

Fees

	Members*	Guests	Students
Lectures	No Fee	$ 2.00	$1.00
Seminars	$7.00	$10.00	$9.00
Per session	$2.50	$ 3.50	$3.00

* Members are those who have paid their Philadelphia Division dues ($3.00) for 1954-1955.

The following manuscripts have been accepted for publication as of January 31, 1955:

Allen, Robert M.	An analysis of twelve longitudinal Rorschach records of one child.
Barker, G. B.	A Rorschach study of a schizophrenic at four stages of his illness.
Bourguignon, Erika and Westerkamm, Emily M.	Rorschach populars in a sample of Haitian protocols.
David, Henry P.	Brief, unstructured items: the projective question.
Dörken, Herbert, Jr.	The Mosaic Test: Second review.
Eron, Leonard D.	Some problems in the research application of the Thematic Apperception Test.
Fine, Reuben	A scoring scheme for the TAT and other verbal projective techniques.
Gottschalk, Louis A. and Hambidge, Gove, Jr.	Verbal behavior analysis.
Holzberg, Jules D. and Schleifer, Maxwell J.	An experimental test of the Rorschach assumption of the impact of color on the perceptual and associative processes.
Kagan, Jerome	Psychological study of a school phobia in one of a pair of identical twins.
Kahn, Theodore C.	Personality projection on culturally structured symbols.
Miller, Carmen	A comparison of high-accident and low-accident bus and street car operators.
Palmer, James O.	Rorschach's Experience Balance: The concept, general population characteristics, and intellectual correlates.
Shatin, Lee	Relationships between the Rorschach Test and the Thematic Apperception Test.
Spiegelman, Marvin	Effect of personality on the perception of a motion picture.
Symonds, Percival	A contribution to our knowledge of the validity of the Rorschach.
Taulbee, Earl S.	The use of the Rorschach test in evaluating the intellectual levels of functioning in schizophrenics.
Tolor, Alexander and Tolor, Belle	Clinical psychologists' judgments of the relative popularity of children on the basis of their human figure drawings.
Wideman, Harley R.	Development and initial validation of an objective scoring method for the Lowenfeld Mosaic Test.
Winter, William D.	Two personality patterns in peptic ulcer patients.

DIRECTORY OF MEMBERS OF THE SOCIETY FOR PROJECTIVE TECHNIQUES AND RORSCHACH INSTITUTE AS OF MARCH 1, 1955

Date preceded by M indicates date elected to membership.
Date preceded by F indicates date elected to fellow status.
Date preceded by St.Aff. indicates date elected as student affiliate.
Date preceded by Aff. indicates date elected as affiliate.

ABBATE, Grace McLean (M.D.)
9 Garden Place
Brooklyn 2, N. Y. M 1941

ABEL, Theodora Mead (Ph.D.)
Palisades M 1944
Rockland County, N.Y. F 1945

ABRAMS, Elias N. (Ph.D.)
Brooklyn Regional Office
Veterans Administration
Mental Hygiene Unit
35 Ryerson Street
Brooklyn 5, N. Y. M 1952

ABRAMS, Julian
Psychology Department
Springfield State Hospital
Sykesville, Md. M 1954

ABRAMS, Ray H. (Ph.D.)
408 S. Lansdowne Avenue
Lansdowne, Pa. M 1950

ABRAMSON, Leonard S. (Ph.D.)
14 Marshall Street
Irvington 11, N. J. M 1948

ABT, Lawrence Edwin (Ph.D.)
151 Rockland Avenue
Larchmont, N. Y. M 1951

ACKERMAN, Bernard R.
124 E. 91st Street
New York 28, N. Y. M 1943

AINSWORTH, Mary D. (Ph.D.)
c/o East African Institute
of Social Research
Makerere College M 1948
P.O. Box 262 F 1950
Kampala, Uganda, Africa

ALCOCK, Miss Theodora
Central Middlesex Group
Hospital Management Com.
Tavistock Clinic
2, Beaumont Street M 1950
London, W. 1 F 1953

ALDEN, Priscilla
1963 W. Broad
Columbus, Ohio M 1949

ALEXANDER, Robert H. (Ph.D.)
Department of Psychology
MacMurray College
Jacksonville, L. I. M 1950

ALLEN, Barbara M.
Department of Psychiatry
Allan Memorial Institute
1025 Pine Avenue West
Montreal, P.Q., Can. M 1953

ALLEN, Doris Twitchell (Ph.D.)
30 W. Fountain Avenue
Glendale, Ohio M 1949

ALLEN, Robert M. (Ph.D.)
Department of Psychology
University of Miami M 1949
Miami 46, Florida F 1951

*ALOZERY, Jessie Jervis (Ph.D.)
228 E. 57th Street
New York 22, N. Y. F 1940

AMCHIN, Abraham
State School
Warwick, N. Y. M 1952

AMES, Mrs. Louise Bates
Gesell Institute of Child
Development
310 Prospect Street
New Haven 11, Conn. M 1951

ANASTASIO, Mary M.
117 W. 13th Street
New York 11, N. Y. M 1952

ANDERSON, Dorothy V. (Ph.D.)
3250 Laurel Canyon Blvd.
No. Hollywood, Calif. M 1953

ANDERSON, Helen Joan
653 E. 17th Street
Brooklyn 30, N. Y. M 1949

APPELL, Melville J.
858 Seward Avenue
Akron 20, Ohio M 1950

ARMON, Mrs. Mary Virginia
470 W. Avenue 43
Los Angeles 65, Calif. M 1946

ARONSON, Mrs. Margaret R.
986 Fifth Avenue
New York, N. Y. M 1948

ARONSON, Marvin L. (Ph.D.)
225 E. 73rd Street
New York 21, N. Y. M 1951

AUERBACH, Mrs. Aline B.
105 E. 53rd Street
New York 22, N. Y. M 1944

BACHRACH, Arthur J. (Ph.D.)
Department of Neurology and
Psychiatry, University of
Virginia Hospital M 1950
Charlottesville, Va. F 1954

BAKER, Corinne F. (Ph.D.)
1839 Farmington Road
East Cleveland 12, O. M 1943

BAKER, Gertrude (Ph.D.)
2726 Montana Avenue
Santa Monica, Calif. M 1948

BALKEN, Eva Ruth (Ph.D.)
906 Hill Street
Latham Park Manor
Greensboro, N. C. M 1948

BALL, Josephine (Ph.D.)
P.O. Box 616
Loudonville, N. Y. M 1949

BARAHAL, George D. (Ph.D.)
Associate Professor
Clinical and Ed. Psychology
Wayne University
Detroit 1, Mich. M 1954

BARBARA, Peter Paul
Box W
Newton, Conn. M 1952

BARKLEY, Bill J. (Ph.D.)
1481 Warrensville
Center Road
Cleveland 21, Ohio M 1950

BARNETT, Irving (Ph.D.)
419 W. 119th Street
New York 27, N. Y. M 1950

BARON, Louis K.
6238 N. Tenth Street
Philadelphia 41, Pa. M 1951

BARON, Samuel (Ph.D.)
39-45 47th Street M 1944
Long Island City 4, N. Y.

BARRATT, Mrs. Emily C.
Psychological Service
111 N. 49th Street
Philadelphia 39, Pa. M 1952

BARRELL, Robert P. (Ph.D.)
Psychology Department
Veterans Adm. Hospital
Downey, Ill. M 1952

BARRINGER, Benton E. (Ph.D.)
138 Fort Hill Avenue
Canandaigua, N. Y. M 1951

BARRY, John R. (Ph.D.)
USAF School of Aviation Med.
Randolph Air Force Base
Randolph Field, Tex. M 1953

BARTLETT, Mrs. Doris A.
924 West End Avenue
New York 25, N. Y. M 1949

BAUER, Johanna R. Goldsmith
831 Oeste Drive
Davis, Calif. M 1945

BEALE, Elizabeth A.
304 W. 14th Street
Lawrence, Kansas M 1951

BEAUCHEMIN, Jean M.
10793 Esplanade
Montreal 12, Quebec
Canada M 1952

BECK, Samuel J. (Ph.D.)
Department of Psychology
University of Chicago
Chicago 37, Ill. F 1950

BELL, John E. (Ed.D.)
Putnam Road M 1949
Holden, Mass. F 1951

BELLAK, Leopold (M.D.)
1160 Fifth Avenue M 1948
New York 29, N. Y. F 1952

BERAN, Marianne (Ph.D.)
Veterans Adm. Hospital
Lyons, N. J. M 1949

BERLINER, Anna (Ph.D.)
Pacific University
Forest Grove, Ore. M 1954

BERNSTEIN, Mrs. Hilde R.
5470 Hydepark Blvd.
Chicago 15, Ill. M 1953

BERNSTEIN, Mrs. Mildred
2084 Smith Street
Merrick, L. I., N. Y. M 1950

BILLIG, Otto (M.D.)
Department of Psychiatry
Vanderbilt University
Hospital M 1941
Nashville, Tenn. F 1950

*BILLINGS, Edward G. (M.D.)
1820 High Street
Denver 6, Colo. F 1940

BLESSING, Harold D. (Ph.D.)
3827 Nancy Avenue
Dunlinden Acres
Wilmington 8, Del. M 1953

BLOCH, Mrs. Beatrice
14 Soundview Avenue
White Plains, N. Y. M 1946

BLUM, Lucille Hollander (Ph.D.)
17 W. 67th Street
New York 23, N. Y. M 1947

BLUMSTEIN, Mrs. Molly G.
5219 Wayne Avenue
Philadelphia 44, Pa. M 1948

BOGARDUS, Helen (Ed.D.)
323 14th Avenue North
Seattle 2, Wash. M 1949

* Charter Member or Charter Fellow

BOLES, Glen
251 Central Park West
New York 24, N.Y. St. Aff. 1953

BONDEL, Mrs. Gertrude
2049 McGraw Ave. St. Aff. 1953
New York 62, N. Y. M 1954

BORSTELMAN, Lloyd J. (Ph.D.)
Child Guidance Clinic
2212 Erwin Road
Durham, N. C. M 1950

BOURKE, William T. (Ph.D.)
VA Mental Hygiene Clinic
333 St. Charles Street
New Orleans, La. M 1950

BOWEN, Barbara
RFD 2
Concord, N. H. M 1953

*BRADWAY, Katherine P. (Ph.D.)
41 Monte Mar Drive M 1940
Sausalito, Calif. F 1949

BRANDON, Grace H.
Court House Annex
Chambersburg, Pa. M 1950

BRANDT, Rudolph J. (Ph.D.)
9400 Bolton Road
Los Angeles, Calif. M 1950

BRAUN, Mrs. Roslyn R.
170-15 Highland Avenue
Jamaica Estates 3, N.Y. M 1949

BRECHER, Sylvia
Psychology Department
Grasslands Hospital
Valhalla, N. Y. M 1951

BRIDGMAN, Olga (M.D.)
Medical School
Univ. of California M 1941
San Francisco, Calif. F 1949

BRODIE, Mrs. Dorothy B.
4833 Tenth Ave. N. M 1943
St. Petersburg, Fla. F 1950

BRODY, Abraham (Ph.D.)
410 Central Park West
New York 25, N. Y. M 1952

BRODY, Gertrude Gillenson
410 Central Park West (Ph.D.)
New York 25, N. Y. M 1948

BROOMHEAD, Elizabeth
5350 42nd Place, N.W.
Washington 15, D.C. M 1944

*BROSIN, Henry W. (M.D.)
University of Pittsburgh
Western Psychiatric Institute
3811 O'Hara Street
Pittsburgh 13, Pa. F 1940

BROUGHHAM, Norma
441 King Street
London, Ontario, Can. M 1953

BROWER, Daniel (Ph.D.)
300 N. Mountain Ave. M 1943
Upper Montclair, N. J. F 1954

BROWER, Mrs. Judith F.
300 North Mountain Avenue
Upper Montclair, N. J. M 1948

BROWN, Fred (Ph.D.)
Mt. Sinai Hospital
Fifth Ave. & 100th St. M 1948
New York, N. Y. F 1950

BROWN, Martha
10 Kulp Court
Battle Creek, Mich. M 1948

BROWNFAIN, John J. (Ph.D.)
1935 Burlingame Avenue
Detroit 6, Mich. M 1954

BROZOVICH, Stanley M.
449 E. Pine
Altadena, Calif. M 1953

BRUCE, Martin M. (Ph.D.)
71 Hanson Lane
New Rochelle, N. Y. M 1952

BRUNSCHWIG, Lily (Ph.D.)
219 Arcadia Street
Park Forest, Ill. M 1953

BRY, Mrs. Mae G.
59 W. 12th Street
New York 11, N. Y. M1954

BUCK, John N.
1600 Langhorne Road
Lynchburg, Va. M 1950

BUCKLE, Donald F. (D.P.M.)
Regional Office for Europe
World Health Organization
Palais des Nations
Geneva, Switzerland M 1942

BUHLER, Charlotte (Ph.D.)
1127 N. Sweetzer M 1943
Los Angeles 46, Calif. F 1951

*BURCHARD, Edward M. L.
55 E. 86th Street (Ph.D).
New York 28, N. Y. F 1940

BURGEMEISTER, Bessie B.
Neurological Institute (Ph.D.)
710 W. 168th Street M 1942
New York 32, N. Y. F 1947

BURTON, Arthur (Ph.D.)
2251 Boxwood Drive
San Jose, Calif. M 1949

CALABRESI, Renata A. (Ph.D.)
360 Central Park West M 1944
New York 25, N. Y. F 1950

CALIGOR, Leopold (Ph.D.)
300 W. 109th Street
New York 25, N. Y. M 1952

CALVERT, Margaret
Verdun Protestant Hospital
P.O. Box 6034
Montreal, Que., Can. M 1952

CAMPION, John Neil, Jr.
510 E. Magnolia Street
Stockton 3, Calif. M 1952

CANTAROW, Mrs. Elizabeth S.
2033 Delancey Street
Philadelphia 3, Pa. M 1950

CANTER, Aaron H. (Ph.D.)
2939 N. 47th Street M 1949
Phoenix, Ariz. M 1952

*CARO, Mrs. Elizabeth R.
2014 Grove Avenue
Richmond, Va. M 1940

CARPENTER, Kenneth E.
49 Medway Street
Providence, R. I. M 1953

CARR, Arthur C. (Ph.D.)
Creedmoor State Hospital
Station 60
Queens Village, N. Y. M 1953

*CARROLL, Clara
Bureau of Child Guidance
117th Street and First Avenue
New York 35, N. Y. F 1940

CARSON, Marjorie
Children's Aid and
Infants' Homes of Toronto
33 Charles Street East
Toronto 5, Ont., Can. M 1952

CARTER, Linda Louise
1115 Wertland Street
Charlottesville, Va. M 1949

CARTWRIGHT, Robert W.
108 W. Constance Ave. (Ph.D.)
Santa Barbara, Calif. M 1952

CASSEL, Maj. R. N. (USAF)
305 Wabash Avenue
Belleville, Ill. M 1954

CEASE, Eugene
Box 234
Warren State Hospital
Warren, Pa. M 1951

CHAMOULOUD, Mrs. Muriel I.
607 Euclid Avenue
Elmira, N. Y. M 1945

CHAREN, Sol
200 Rhode Island Avenue, N.E.
Washington 2, D.C. M 1949

CLAPP, Chester D. (Ph.D.)
19785 Westbrook
Detroit 19, Mich. M 1954

*CLAPP, Mrs. Hazel S.
18 W. Micheltorena Street
Santa Barbara, Calif.

CLAUSS, Helen O.
19 W. Market Street
Danville, Pa. M 1951

CLERK, Mrs. Gabrielle Brunet
3877 Maplewood Avenue
Montreal, Que., Can. M 1949

COHEN, Mrs. Mathilde Weill
46 E. 91st Street
New York 28, N. Y. M 1942

COHEN, William J. (Ph.D.)
37 Colonial Park Drive
Springfield, Pa. M 1951

*COHN, Frederick E. (M.D.)
77 E. Market Street
Rhinebeck, N. Y. M 1940

COHN, Mrs. Ruth C.
159 Liberty Road
Englewood, N. J. M 1946

COLE, Joseph Carl (Ph.D.)
Metropolitan State Hospital
Psychology Department
Norwalk, Calif. M 1949

COLM, Hanna (Ph.D.)
3 Overhill Road
Falls Church, Pa. M 1944

COOK, Philip H. (Ph.D.)
Department of Labour and
National Service
Swanston Street
Melbourne c.1 M 1941
Victoria, Australia F 1949

*COWIN, Marion
416 W. 20th Street
New York 11, N. Y. F 1940

COX, Rachel Dunaway (Ph.D.)
503 Walnut Lane M 1950
Swarthmore, Pa. F 1952

CRAMER, Fern Joy
1025 Pine Avenue West
Montreal, Que., Can. M 1951

CRILE, Mrs. Mary
Box 1083
Carmel, Calif. M 1945

CROVETTO, Lorraine
703 Carondelet Street
New Orleans 12, La. M 1953

CUMMINGS, C. Peter (Ph.D.)
626 Swede Street
Norristown, Pa. M 1954

CUNNINGHAM, Mrs. Cornelia
100 Chesney Lane
Philadelphia 18, Pa. M 1950

DAVENPORT, Beverly (Ph.D.)
Veterans Adm. Hospital
American Lake, Wash. M 1949

DAVID, Henry P. (Ph.D.)
University of Pittsburgh
School of Medicine
3811 O'Hara Street
Pittsburgh 13, Pa. M 1953

DAVIDSON, Alene (Ph.D.)
280 Melbourne Road
Great Neck, N. Y. M 1953

*DAVIDSON, Helen H. (Ph.D.)
425 Riverside Drive
New York 25, N. Y. F 1940

DAVISON, Arthur H. (Ph.D.)
California State Prison M 1952
San Quentin, Calif. F 1953

DERI, Mrs. Susan K.
235 W. 76th Street M 1948
New York 23, N. Y. M 1950

DERNER, Gordon F. (Ph.D.)
Department of Psychology
Adelphi College M 1949
Garden City, N. Y. F 1951

DE VAULT, Helen C.
593 33rd Street M 1950
Manhattan Beach, Calif.

DE VILLIERS, David Z.
University College
Fort Hare
Union of South Africa M 1953

DIAMOND, Mrs. Florence
135 Sierra View Road
Pasadena 2, Calif. M 1950

DIAMOND, Mrs. Gertrude S.
1328 Sage Street
Far Rockaway, N. Y. M 1948

DIANA, Pearl Butler (Ph.D.)
P.O. Box 87 M 1949
Gary, Ind. F 1951

DINGMAN, Paul R. (Ph.D.)
Child Guidance Center
500 Garver Building
Des Moines, Iowa M 1950

DOMINGUEZ, Kathryn (Ph.D.)
Child Psychiatric Clinic
335 Franklin Avenue
Scranton, Pa. M 1943

DORKEN, Herbert, jr. (Ph.D.)
Verdun Protestant Hospital
P.O. Box 6034 M 1949
Montreal, Que., Can. F 1951

DOUGHERTY, Mrs. Margaret R.
1804 Roselynn Avenue
Scranton 10, Pa. M 1944

DRYSELIUS, Harold
601 S. Gramercy Place
Los Angeles, Calif. M 1950

DRYZER, Evelyn F.
14861 Sussex
Detroit 27, Mich. M 1953

DUDEK, Stephanie Z.
258 W. 22nd Street
New York 3, N. Y. M 1949

DUE, Floyd O. (M.D.)
370 29th Street
Oakland 9, Calif. M 1943

DUFRESNE, Georges
49 Spring Grove Crescent
Outremont, near Montreal
Canada M 1954

DUNLAP, Dorothy
Agnews State Hospital
Agnew, Calif. M 1954

DUNN, Michael B.
207 Midland Avenue M 1941
Wayne, Pa. F 1943

*EARL, C. J. C. (F.R.C.P.I.)
3 Dale Drive
Stilorgan County Dublin
Ireland F 1940

EIDUSON, Mrs. Bernice T.
941 Stonehill Lane
Los Angeles 49, Calif. M 1949

ELDRED, Donald M.
Psychology Department
Vermont State Hospital
Waterbury, Vt. M 1948

ELIZUR, Abraham (Ph.D.)
6 Tel Hai Street
Tel Aviv, Israel M 1949

ELLIOTT, Merle H. (Ph.D.)
1025 Second Avenue
Oakland 6, Calif. M 1944

ELLIS, Albert (Ph.D.)
Parc Vendome
333 W. 56th Street
New York 19, N. Y. M 1950

*EMERY, Margaret
43 Fifth Avenue
New York, N. Y. F 1940

ENOCHS, Neil
366 Marie Avenue St.Aff. 1954
Los Angeles 42, Calif.

EPHRON, Beulah K. (Ed.D.)
40 E. 10th Street
New York 3, N. Y. M 1949

EPSTEIN, Hans L. (Ph.D.)
722 W. 176th Street
New York 33, N. Y. M 1944

ERICSON, Mrs. Helen
11844 E. Deana Street
El Monte, Calif. Aff. 1954

EVANS, John T. (Ph.D.)
85 Otis Street
Newtonville 60, Mass. M 1951

EVANS, Ray B.
2915 Rimpau Boulevard
Los Angeles 16, Calif. M 1954

EVERETT, Evalyn G.
Box 51
Napa State Hospital
Imola, Calif. M 1953

FARBEROW, Norman L.
363 N. Curson Ave. (Ph.D.)
Los Angeles 36, Calif. M 1949

FARLEY, Julie (M.D.)
418 Northway
Baltimore, Md. M 1949

FATERSON, Hanna F. (Ph.D.)
27 Jane Street M 1943
New York 14, N. Y. F 1946

FEHRENBACH, Mrs. Alice
181 Magnolia Street
Denver 20, Colo. M 1951

FEIFEL, Herman (Ph.D.)
VA Mental Hygiene Clinic
1031 S. Broadway
Los Angeles 15, Calif. M 1943

FEINBERG, Henry
15886 La Salle
Detroit, Mich. M 1949

FELDBERG, Theodore M. (M.D.)
Johns Hopkins Hospital
Baltimore 5, Md. M 1944

FELDMAN, Dorothy A. (Ph.D.)
University of Pittsburgh
School of Medicine
Pittsburgh 13, Pa. M 1952

FELDMAN, Irving (Ph.D.)
141 N. Riverside Avenue
Red Bank, N. J. M 1953

FELZER, Stanton B.
5532 N. 18th Street
Philadelphia 26, Pa. M 1954

FERGUSON, Kingsley G.
101 Grand Avenue
London, Ont., Canada M 1954

FERRACUTI, Franco (M.D.)
Istituto di Psicologia
University of Rome
Rome, Italy M 1954

FICHMAN, Lionel L.
1454 Comstock Avenue
Los Angeles 24 St. Aff. 1954

FIKE, Mrs. Irene A.
271 Nelson Road
Scarsdale, N. Y. M 1941

FILMER-BENNETT, Gordon
Rochester Guidance (Ph.D.)
Center, 31 Gibbs Street
Rochester 4, N. Y. M 1954

FILS, David H. (Ph.D.)
Los Angeles County
Supt. of Schools Office
808 N. Spring Street
Los Angeles, Calif. M 1954

FINE, Reuben (Ph.D.)
225 W. 86th Street M 1949
New York 24, N. Y. F 1954

FINN, Michael H. P. (Ph.D.)
3842 Southern Cross Drive
Baltimore 7, Md. M 1954

FISCHER, Liselotte K. (Ph.D.)
103 Pembroke Street
Hartford 12, Conn. M 1949

FISHER, Jerome (Ph.D.)
121 Havenside Drive
San Francisco 27, Calif. M 1950

FLEMMING, Edward L. (Ed.D.)
1846 Bartram Road
Jacksonville, Fla. M 1954

FONT, Marion McKenzie
627 S. Carrollton Ave. M 1942
New Orleans 13, La. F 1947

FORER, Bertram R. (Ph.D.)
2170 E. Live Oak Dr. M 1949
Los Angeles 28, Calif. F 1951

FORER, Lucille K. (Ph.D.)
2170 E. Live Oak Drive
Los Angeles 28, Calif. M 1953

FORREST, Mrs. Carol W.
18 Elm Place
Red Bank, N. J. M 1951

FORTIN, Mrs. Claire Mathieu
1260 Leyden Street
Denver 2, Colo. M 1950

*FOSBERG, Irving A. (Ph.D.)
2700 Calhoun Street M 1940
New Orleans 18, La. F 1949

FOSTER, Austin (Ph.D.)
The Psychopathic Hospital
University of Texas
Medical Branch
Galveston, Texas M 1950

FRANCOEUR, Thomas A.
1070 Crevier Avenue (Ph.D.)
Ville St. Laurent
Prov. Que., Canada Aff. 1954

FRANK, Lawrence K.
72 Perry Street Honorary
New York 14, N. Y. M 1954

FRANKEL, Esther B. (Ph.D.)
173 Walmer Road
Toronto, Canada M 1953

*FRANZETTI, Mrs. Rosa
Padlina de
"El Silencio" Bloque 6-C-4
Caracas, Venezuela M 1940

FREAR, Edgar
Montrose, Pa. M 1950

FREY, Mrs. Harriet K.
59 Francisco Avenue
West Caldwell, N. J. M 1953

FRIEDMAN, Alice (Ph.D.)
780 Madison Avenue
New York 21, N. Y. M 1951

FRIEDMAN, Gladys Miller
2860 Van Aken Blvd.
Cleveland 20, Ohio M 1949

FRIEDMAN, Howard (Ph.D.)
572 E. Genesee Street
Fayetteville, N. Y. M 1951

FRIEDMAN, Ira (Ph.D.)
2860 Van Aken Boulevard
Cleveland 20, Ohio M 1954

FRIEND, Mrs. Jeannette G.
16 Greenough Circle
Brookline 46, Mass. M 1949

*FROMM, Erika O. (Ph.D.)
5717 S. Kenwood
Chicago 37, Ill. M 1940

FRY, Franklyn D.
1724 Wyoming Avenue
Forty Fort
Wilkes-Barre, Pa. M 1952

FRY, Mrs. Martha O.
1724 Wyoming Avenue
Forty Fort
Wilkes-Barre, Pa. M 1952

FUCHSMAN, Seymour H.
225 W. 86th Street
New York 24, N. Y. M 1944

FULLER, Paul (Ph.D.)
Florida State University
Tallahassee, Fla. M 1954

GARDNER, Mrs. Ann K.
2569 Berkshire Road
Cleveland 6, Ohio M 1942

GASOREK, Kathryn
30 E. Elm Street
Linden, N. J. M 1949

GAUDET, Frederick J. (Ph.D.)
210 W. 70th Street
New York 23, N. Y. M 1949

*GAUDET, E. Louise (Ph.D.)
210 W. 70th Street
New York 23, N. Y. F 1940

GEIL, George A.
919 Kings Avenue
Springfield, Mo. M 1943

GELLES, Herbert M.
295 Wadsworth Avenue
New York 33, N.Y. St.Aff. 1953

*GERING, Mrs. Evelyn F.
18063 Valley Vista Blvd.
Encino, Calif. M 1940

GERSTEN, Charles (Ph.D.)
New Jersey Neuro-Psychiatric Institute
Skillman, N. J. M 1949

GIBBY, Robert G. (Ph.D.)
1220 Jeffras Avenue
Marion, Ind. M 1954

GILBERT, Raymond R.
32 Halifax Street
Boston 30, Mass. M 1951

GILLENSON, Gertrude N.
See Brody, Gertrude G. (Ph.D.)

GILLMAN, Mrs. Etta C.
16 Stevenson Avenue
Hartsdale, N. Y. M 1944

GOLDFARB, William (M.D.)
720 Riverside Drive M 1941
New York 31, N. Y. F 1944

GOLICK, Mrs. Margaret
944 Dunlap Avenue M 1953
Outremont, Quebec, Canada

GONDOR, Mrs. Lily H.
315 E. 56th Stree M 1949
New York 22, N. Y. F 1952

GOODMAN, Harvey (Ph.D.)
97 Cedarhurst Avenue
Cedarhurst, N. Y. M 1954

GOODMAN, Morris (Ph.D.)
3 Wellington Road
Livingston, N. J. M 1953

GOOLISHIAN, Harold A. (Ph.D.)
3323 Avenue "O"
Galveston, Texas M 1952

GORDON, Thelma
307 W. 11th Street
New York 14, N. Y. M 1951

GOTTLIEB, Mrs. Sophie B.
225 W. 86th Street
New York 24, N. Y. M 1943

GRAHAM, Virginia T. (Ph.D.)
General Hospital, N-3
Cincinnati 29, Ohio M 1953

GRASSI, Joseph R.
Bowman-Gray School of Med.
Wake Forest College
Winston-Salem N. C. M 1942

GRAVES, Winifred S. (Ph.D.)
4242 Cornelius Ave. M 1948
Indianapolis, Ind. F 1951

GRAYSON, Harry M.
12640 Oxnard Street M 1951
North Hollywood, Calif.

GREENBERG, Nathan
5447 Jeanne Mance Street
Montreal, Quebec
Canada St. Aff. 1954

GREENBERG, Pearl (Ph.D.)
25 W. Henry Street
Linden, N. J. M 1951

GREENE, Janet S. (Ph.D.)
65 E. 76th Street
New York 21, N. Y. M1953

GREENSTADT, William M.
35 E. 30th Street
New York, N. Y. St. Aff. 1954

GROFF, Marne L. (Ph.D.)
329 W. Ridge Avenue
State College, Pa. M 1952

GROSSMAN, Mrs. Marc J.
16950 S. Woodland Road
Shaker Heights, Ohio M 1949

GROSSMAN, Searles A. (Ph.D.)
23 Kensington Lane M 1951
Brookside, Newark, Del. F 1954

GUERTIN, Wilson H. (Ph.D.)
Box 635 M 1950
Perry Point, Md. F 1953

GUINDON, Jeannine
39 Quest Gouin Blvd.
Montreal, Que., Can. M 1951

GUNDLACH, Ralph (Ph.D.)
10 E. 76th Street
New York 21, N. Y. M 1951

GUREVITZ, Saul (Ph.D.)
680 West End Avenue
New York 25, N. Y. M 1949

GURVICH, Mrs. Bernice M.
31 W. 11th Street
New York 11, N. Y. M 1950

GURVITZ, Milton S. (Ph.D.)
Hillside Hospital
P.O. Box 38 M 1948
Glen Oaks, N. Y. F 1951

GUY, William
Springfield State Hospital
Sykesville, Md. M 1953

HABER, Wm. B. (Ph.D.)
12 E. 86th Street
New York 28, N. Y. M 1953

HAHN, Albert R.
R.F.D. 2
Westwood, N. J. M 1951

HAINES, Dr. Miriam S.
166 Morse Place
Englewood, N. J. M 1951

*HALLOW, William C. (Ph.D.)
2137 Morningside Road
Topeka, Kansas M 1940

*HALLOWELL, A. Irving (Ph.D.)
Box 14, Bennett Hall
Univ. of Pennsylvania M 1940
Philadelphia 4, Pa. F 1944

HALLOWELL, Dorothy K.
3318 Midvale Avenue (Ph.D.)
Philadelphia 29, Pa. M 1947

HALPERIN, Sidney L. (Ph.D.)
Bureau of Mental Hygiene
Department of Health
c/o University of Hawaii
Honolulu 14, Hawaii M 1949

HALPERN, Miss Esther
3570 Ridgewood Avenue
Montreal, Canada St. Aff. 1954

HAMMER, Emanuel F. (Ph.D.)
210 Riverside Drive
New York 25, N. Y. M 1953

HAMMOND, Mrs. Eleanor
Buckingham Valley
Bucks County, Pa. M 1947

HAND, Mary Ella
317½ W. St. Joseph
Lansing, Mich. M 1948

HANDEL, Gerald
Committee on Human Development
University of Chicago
Chicago 37, Ill. M 1954

HANFMANN, Eugenia (Ph.D.)
17 Dunster Street M 1948
Cambridge 38, Mass. F 1950

HARRIS, Albert J. (Ph.D.)
Educational Clinic
Queens College
Flushing, N. Y. M 1951

HARRIS, June
Bur. of Educational Research
110 Livingston Street
Brooklyn, N. Y. M 1941

HARRIS, Robert A. (Ph.D.)
Psychology Department
Brooklyn College
Brooklyn 10, N. Y. M 1954

HARRIS, Robert E. (Ph.D.)
University of California
Medical School
San Francisco 22, Calif. M 1948

HARRIS, William W.
210 E. 181st Street
Bronx, N. Y. M 1949

*HARROWER, Molly R. (Ph.D.)
55 E. 86th Street
New York 28, N. Y. F 1940

HARTZLER, Ethel M.
Superintendent's Office
Northumberland County
Public Schools
Court House Annex
Sunbury, Pa. M 1951

HAWKINS, Mrs. Hermione
Hillside Road
Stevenson, Md. M 1951

HAYS, Berta
701 S. Gramercy Drive
Los Angeles 5, Calif. M 1949

HEISLER, Verda (Ph.D.)
1541 Eighth Avenue
San Diego, Calif. M 1951

HELLERSBERG, Elisabeth F.
641 Whitney Avenue (Ph.D.)
New Haven, Conn. M 1949

HEMMENDINGER, Larry
58 Judd Street (Ph.D.)
Fairfield, Conn. M 1950

HENRY, William E. (Ph.D.)
5835 Kimbark Avenue
Chicago, Ill. M 1948

HERNESS, Mrs. Christina
Amherst H. Wilder Child Guidance Clinic
670 Marshall Avenue
St. Paul 4, Minn. M 1952

HERRMANN, Katherine F.
115-A Ogden Avenue M 1946
Swarthmore, Pa. F 1950

*HERTZ, Marguerite R. (Ph.D.)
2835 Drummond Road
Shaker Heights, Ohio F 1940

*HERTZMAN, Max (Ph.D.)
Department of Psychology
College of City of N.Y. M 1940
New York, N. Y. F 1946

HIGGINSON, G. K. (Ph.D.)
6040 N. Montana
Portland, Ore. M 1954

*HILDEN, Arnold H. (Ph.D.)
628 Clark Avenue M 1940
Webster Groves 19, Mo. F 1943

HILKEVITCH, Rhea R. (Ph.D.)
Roosevelt University
430 S. Michigan Avenue
Chicago 5, Ill. M 1954

*HIRNING, L. C. (M.D.)
62 Waller Avenue
White Plains, N. Y. F 1940

HIRSCH, Mrs. Janet F.
67-49-C 192nd Street
Fresh Meadows N. Y. M 1948

HIRST, Mrs. Carol G.
109 Manor Road
Paoli, Pa. M 1952

HOCH, Erasmus L. (Ph.D.)
P.O. Box 62
Readfield Depot, Me. M 1954

HOCKER, Margaret W.
220 Reily Street
Harrisburg, Pa. M 1951

HODSON, Evelyn Troup (Ph.D.)
11408 Burnham Street M 1948
Los Angeles 49, Calif. F 1949

HOLMES, Frances B. (Ph.D.)
R.D. 2, Harwinton
Torrington, Conn. M 1950

HOLODNAK, Helen Barbara
31-38—36th Street
Astoria 3, L. I., N. Y. M 1949

HOLT, Robt. R. (Ph.D.)
Research Center for
Mental Health
104 E. 9th Street M 1948
New York 3, N. Y. F 1951

HOLZBERG, Jules D. (Ph.D.)
Box 351 M 1949
Middletown, Conn. F 1954

HOPKINS, Mrs. Edith D.
2975 Scarborough Road
Cleveland Heights, O. M 1943

HORLICK, Reuben S. (Ph.D.)
341 James Street
Falls Church, Va. M 1951

HOUCK, Dorothy
220 E. 12th Street
New York, N. Y. M 1952

HOUSMAN, Harold S. (Ph.D.)
1465 Oakland Court
Inkster, Mich. M 1954

HOWARD, J. W. (Ph.D.)
Route 2
Rigaud, P.Q., Canada M 1954

HOWARD, Stephen J.
Psychological Service Center
Univ. of Southern California
Los Angeles, Calif. St. Aff. 1954

HOWLAND, Allan O.
Administration Building
State Hospital
Norristown, Pa. M 1951

HUGHES, Robert M. (Ph.D.)
3936 Reading Road N.E.
Route 2 M 1944
Chamblee, Ga. F 1954

HUTT, Max L. (Ph.D.)
Department of Psychology
University of Michigan M 1947
Ann Arbor, Mich. F 1952

IMRE, Paul
Spring Grove State Hospital
Catonsville 28, Md. M 1954

INMAN, John M.
1310 La Loma Avenue
Berkeley 8, Calif. M 1945

IVES, Margaret (Ph.D.)
St. Elizabeths Hospital
Washington 20, D.C. M 1953

*JACOBY, Julia
R.D. 3
Lincoln, Nebr. M 1940

JAHODA, Hedwig (Ph.D.)
500 W. 235th Street
New York 63, N. Y. M 1952

JEFFREYS, Alvis W., Jr. (Ph.D.)
320 York Avenue
Staunton, Va. M 1952

JOEL, Walther (Ph.D.)
1742 Silverwood Terr. M 1946
Los Angeles 26, Calif. F 1950

JOHNSON, Lawrence J.
7 E. Pearl Street
Danbury, Conn. M 1953

JOHNSON, Richard B.
National Hospital for
Speech Disorders
61 Irving Place
New York, N. Y. M 1953

JOHNSON, Theresa
229 S. Maple Drive
Beverly Hills, Calif. M 1949

JOSEPH, Alice (M.D.)
Garrison-on-Hudson
New York M 1944

JOSEY, William E.
3715 Farbar Street
Houston, Texas M 1949

*JUNKEN, Elizabeth M. (Ph.D.)
468 Lydecker Street
Englewood, N. J. M 1940

KABACK, Goldie R. (Ph.D.)
375 Riverside Drive
New York 25, N. Y. M 1950

KADINSKY, D.
8 P. Smolenski Street
Tel Aviv, Israel M 1946

KADIS, Mrs. Asya L.
1060 Park Avenue
New York 28, N. Y. M 1944

KAHN, David F. (Ph.D.)
27 Spring Street
Stamford, Conn. M 1953

KAHN, Maj. Theodore C. (Ph.D.)
Box 127, USAF School of
Aviation Medicine M 1953
Randolph AFB, Texas F 1954

KALANT, Mrs. Lee
140 Sycamore Street
Somerville, Mass. M 1954

KALINKOWITZ, Bernard N. (Ph.D.)
Graduate School of
Arts and Science
New York University
Washington Square
New York, N. Y. M 1954

KAPIT, Milton E.
1 W. 85th Street
New York 21, N. Y. M 1950

KAPLAN, Herbert
P.O. Box 57
Fishkill, N. Y. M 1949

KAPLAN, Norman (Ph.D.)
Psychology Department
St. Elizabeths Hospital
Washington 20, D.C. M 1949

KATES, Solis L. (Ph.D.)
Department of Psychology
University of Oklahoma
Norman, Okla. M 1949

KATZ, Mrs. Florine
88 Central Park West
New York 23, N. Y. M 1953

KATZ, Mrs. Harriet
190 Riverside Drive
New York 24, N. Y. M 1950

KAUFMANN, Elizabeth M.
414 W. 121st Street
New York 27, N. Y. M 1950

*KELLEY, Douglas M. (M.D.)
44 Highgate Road
Berkeley 7, Calif. F 1940

KELLMAN, Samuel
3269 Lawrence Avenue
Detroit 6, Mich. M 1949

KELSEY, Howard Phelps
1252 Fourth Street
Sarasota, Fla. M 1944

*KEMPLE, Camilla
20 W. 86th Street M 1940
New York, N. Y. F 1946

KENDIG, Isabelle V. (Ph.D.)
Ashton, Md. M 1944 F 1946

KESSLER, Mable G. (Ph.D.)
Montgomery County
Public Schools
Court House
Norristown, Pa. M 1952

KEW, Clifton E.
30 Fifth Avenue
New York 11, N. Y. M 1949

KING, Francis W. (Ph.D.)
Office of Student Counseling
Dartmouth College
Hanover, N. H. M 1952

KINGSLEY, Leonard
2284 Grand Avenue
Bronx 53, N. Y. St. Aff. 1954

KIRK, Virginia (Ph.D.)
Vanderbilt University
School of Medicine
Nashville 4, Tenn. M 1944

KIRKNER, Frank J. (Ph.D.)
260 San Remo Drive
Long Beach 3, Calif. M 1949

KLASS, Walter K. (Ph.D.)
146 N. Sleight Street
Naperville, Ill M 1946

KLATSKIN, Ethelyn H. (Ph.D.)
Department of Psychology
Yale University
333 Cedar Street
New Haven, Conn. M 1946

*KLEIN, Eva L. (M.D.)
1148 Fifth Avenue
New York 28, N. Y. M 1940

KLEINBERG, Mrs. Rosalyn K.
6807 N. 10th Street
Philadelphia 26, Pa.

*KLOPFER, Bruno (Ph.D.)
Box 2971
Carmel, Calif. F 1940

KLOPFER, Walter G. (Ph.D.)
Norfolk State Hospital M 1946
Norfolk, Nebr. F 1951

KOGAN, Kate L. (Ph.D.)
6034—44th Ave., N.E. M 1941
Seattle 5, Wash. F 1944

KOGAN, William S. (Ph.D.)
6034 44th Avenue, N.E.
Seattle 5, Wash. M 1941

KORDA, Mrs. Geraldine J.
80 S. Parkwood Avenue
Pasadena 10, Calif. M 1949

KORNER, Anneliese F. (Ph.D.)
2255 Post Street M 1940
San Francisco 15, Calif. F 1953

KORNREICH, Melvin (Ph.D.)
147-10—84th Road
Jamaica, N. Y. M 1951

KOTKOV, Benjamin (Ph.D.)
133 Lucerne St.
Dorchester, Mass. M 1949

*KRAFFT, Mrs. Margaret R.
172 E. 91st Street
New York 28, N. Y. M 1940

KRAL, V. Adalbert (M.D.)
1849 Lincoln Avenue
Montreal, Que., Can. M 1953

KRASNER, Leonard (Ph.D.)
Clinical Psychology Service
Veterans Hospital
Lexington, Ky. M 1952

KRECZKOWSKI, Joseph
729 Carson Street
Pittsburgh 3, Pa. M 1944

KROUT, Maurice H. (Ph.D.)
6838 S. Normal Blvd.
Chicago 21, Ill. M 1950

KRUGMAN, Dorothy C. (Ph.D.)
425 Riverside Drive
New York 25, N. Y. M 1944

KRUGMAN, Herbert E. (Ph.D.)
425 Riverside Drive
New York 25, N. Y. M 1943

KRUGMAN, Judith I. (Ph.D.)
100 Remsen Street
Brooklyn 2, N. Y. M 1941

*KRUGMAN, Morris (Ph.D.)
Board of Education
110 Livingston Street
Brooklyn 2, N. Y. F 1940

KUTASH, Samuel B. (Ph.D.)
3 Park Road M 1950
Maplewood, N. J. F 1951

LAKIN, Harriet A.
1959 S. Crescent Heights
Los Angeles 34, Calif. M 1950

LANDISBERG, Selma
204 W. 88th Street
New York 24, N. Y. M 1950

LASKOWITZ, Pvt. David
U.S. 51260834 528th Medical Detachment (Psych.)
5th General Hospital
APO 154, c/o Postmaster
New York, N. Y. M 1953

LAWRENCE, James F. (Ph.D.)
Veterans Adm. Hosp. M 1949
Brockton, Mass. F 1954

LEBEAUX, Mrs. Thelma W.
46 June Street
Worcester 2, Mass. M 1944

LEDER, Ruth
301 E. 21st Street
New York 10, N. Y. M 1950

LEDWITH, Nettie H. (Ph.D.)
Child Guidance Center
3713 Fifth Avenue M 1948
Pittsburgh 13, Pa. F 1952

LEE, Dorothy B.
33-33 82nd Street M 1950
Jackson Heights 72, N. Y.

LEHMANN, Heinz E. (M.D.)
Verdun Protestant Hospital
Box 6034 M 1943
Montreal, Que., Can. F 1951

LEHRER, Ruth (Ph.D.)
Woodside Receiving Hospital
8000 E. Indianola Ave. M 1944
Youngstown 8, Ohio F 1954

LEONARD, A. T.
703 Madison Avenue, S.E.
Grand Rapids, Mich. M 1954

LEOPOLD, Julius
104-29 117th St. St. Aff. 1953
Richmond Hills 19, N. Y.

LEVENSTEIN, Mrs. Phyllis
67-33 Kissena Boulevard
Flushing, L. I., N. Y. M 1948

LEVI, Joseph (Ph.D.)
50 W. 72nd Street M 1947
New York 23, N. Y. F 1954

LEVINE, Abraham
2354 Paulding Avenue
Bronx 69, N. Y. M 1952

LEVINE, Mrs. Phyllis R.
1587 Coventry Road
East Cleveland, Ohio M 1953

LEVINGER, Leah
Jewish Board of Guardians
228 E. 19th Street
New York 3, N. Y. M 1952

LEVINSON, Boris M. (Ph.D.)
39-25 47th Street
Sunnyside, L. I. C. 4, N. Y.

LEVIT, Herbert I.
Dixmont State Hospital
Glenfield, Pa. M 1954

LEVY, Ruth Jacobs (Ph.D.)
3018 E. 125th Street M 1948
Seattle 55, Wash. F 1951

LEWIN, Herbert S. (Ph.D.)
884 West End Avenue M 1951
New York, N. Y. F 1954

LEWIS, Robert T. (Ph.D.)
11162 Sarah Street M 1953
North Hollywood, Calif.

LIBRESCO, Emile
R.D. 1, Box 14
Pound Ridge, N. Y. M 1952

LIEBEN, Mrs. Beatrice
318 Ivy Lane
Englewood, N. J. M 1953

LITTLE, Jack F. (Ph.D.)
249 Montecito Avenue
Oakland 10, Calif. M 1949

LOCKWOOD, Wallace V. (Ph.D.)
2548 Fifth Avenue
San Diego 3, Calif. M 1949

LOEHRKE, Leah M. (Ph.D.)
Veterans Administration
12227 Clifton Blvd.
Lakewood, Ohio M 1954

LOLIS, Kathleen
275 Clinton Avenue
Brooklyn 5, N. Y. M 1949

LONGLEY, James L.
Industrial Psych. Division
2000 Second Avenue
Detroit 26, Mich. M 1953

LONSTEIN, Murray (Ph.D.)
Veterans Administration Hosp.
Leech Farm Road
Pittsburgh 6, Pa. M 1953

*LOPES, Jose Leme (M.D.)
Rua Martins Ferreira 75
Rio de Janeiro, Brazil F 1940

LORD, Edith (Ph.D.)
Veterans Adm. Hosp., Box 381
Montrose, N. Y. M 1953

LOW, Howard
Department of Psychology
Penn State University
State College, Pa. M 1954

LUCAS, Mrs. Winafred B.
2147 Dellwood Lane
Los Angeles 24, Calif. M 1951

LUNDIN, William (Ph.D.)
Chicago State Hospital
6500 Irving Park Road
Chicago 34, Ill. M 1954

LUSSIER, Andre
39 W. Boulevard Gouin
Montreal, Que., Can. M 1951

MacDONALD, D. Stewart (Ph.D.)
Child Guidance Center
1517 "H" Street
Lincoln, Nebr. M 1950

MACHOVER, Mrs. Karen
96-16—67th Avenue M 1947
Forest Hills, N. Y. F 1948

MACHOVER, Solomon (Ph.D.)
96-16 67th Avenue M 1947
Forest Hills, N. Y. F 1948

MAHLER, Paul H. (Ph.D.)
102 W. 80th Street
New York 24, N. Y. M 1949

MAITI, Prof. Haripada P.
Director, Institute of
Child Development
Ahmedabad 9, India M 1952

MALLINGER, Betty R. (Ph.D.)
60 S. Negley Avenue
Pittsburgh 32, Pa. M 1952

MALLOY, Mrs. Helga
35 Church Hill
Montreal 6, Quebec
Canada M 1943

MALM, Mrs. Mildred
11423 E. Hallwood Drive
El Monte, Calif. M 1949

MALONE, Anne
Department of Psychiatry
Montreal General Hospital
Montreal, P. Quebec
Canada St. Aff. 1954

*MANN, Mrs. Edna B.
215 W. 98th Street
New York 25, N. Y. F 1940

MANSON, Morse P. (Ph.D.)
10655 Santa Monica Blvd.
Los Angeles 25, Calif.

MANUILOW, Tatiana
Allan Memorial Institute
of Psychiatry
1025 Pine Avenue, W.
Montreal, Que., Can. M 1954

MARGOLIS, Mrs. Muriel F.
390 Terrace Avenue M 1949
Garden City, L. I., N. Y.

MARKER, Mrs. Beatrice W.
2131 Delancey Place
Philadelphia 3, Pa. M 1951

MARKHAM, Mrs. Sylvia
116 E. 68th Street
New York 21, N. Y. M 1954

MATHER, Elise D.
5260 W. Chicago
Detroit 4, Mich. M 1948

MATHEWS, W. Mason (Ph.D.)
Merrill-Palmer School
71 Ferry Avenue, E.
Detroit 2, Mich. M 1949

MATHIAS, Rudolf
321 S. Midvale Boulevard
Madison, Wisc. M 1950

MATLI, Elsie D.
2042 Hyde Street St. Aff. 1954
San Francisco, Calif.

*McBRIDE, Katharine E. (Ph.D.)
Bryn Mawr College
Bryn Mawr, Pa. M 1940

McCARY, James I. (Ph.D.)
5101 Almeda at Southmore
Houston, Texas M 1948

McCLOSKEY, Mrs. E.
Venita Amsler
5515 Wissahickon Avenue
Philadelphia 44, Pa. M 1948

McDONALD, Franklin (Ph.D.)
3700 Cherrywood Avenue
Los Angeles 18, Calif. M 1952

McNEILL, Harry V. (Ph.D.)
125 E. 26th Street M 1950
New York 10, N. Y. F 1951

McPHERSON, Marion W. (Ph.D.)
The Neuro-Psychiatric
Clinic of St. Louis
457 N. Kingsway
St. Louis 8, Mo. M 1953

MEHR, Helen Margulies (Ph.D.)
498 McArthur Avenue M 1941
San Jose, Calif. F 1949

MERCER, Margaret (Ph.D.)
St. Elizabeths Hospital M 1946
Washington, D.C. F 1950

MEYER, George (Ph.D.)
2479 16th Avenue
San Francisco, Calif. M 1950

*MEYER, Mortimer M. (Ph.D.)
348 N. Windsor Blvd. M 1940
Los Angeles 4, Calif. F 1949

*MIALE, Mrs. Florence
860 Riverside Drive
New York, N. Y. F 1940

MILLER, Carmen (Ph.D.)
5935 Colhurst
Dallas, Texas M 1951

MILLER, Cecil R.
1762 Malcolm Avenue
Los Angeles 24
Calif. St. Aff. 1953

MILSTEIN, A. Freda
9595 Greenview
Detroit 28, Mich. M 1946

MIMS, Mrs. Jean Giesey
3715 Tom Green Street
Austin, Texas M 1943

MINDESS, Harvey (Ph.D.)
900 Sherbrooke, W.
Montreal, Que., Can. M 1953

MOLISH, CDR Herman B.
MSC, USNR
Naval Medical Center Staff
Bethesda, Md. M 1950

MONTALTO, Fannie D.(Ph.D.)
2634 Fourth Avenue
San Diego 3, Calif. M 1952

MOORE, Mrs. Harriet Bruce
430 N. Michigan Avenue
Chicago 11, Ill. M 1953

MORELAND, Mrs. Margaret E.
Oakwood Drive
Grand Island, N. Y. M 1950

MORF, Gustave(M.D.)
1410 Favolle Avenue
Montreal 19, Quebec
Canada M 1954

MORGAN, Clellan L.(Ph.D.)
R.F.D. 3
Media, Pa. M 1950

MORGAN, David W.(M.D.)
127 N. Madison Avenue
Pasadena 1, Calif. M 1943

MORGAN, Olive J.(Ph.D.)
RFD No. 3
Media, Pa. M 1950

MORIZE, Mrs. Andre
4, Rue Jean-du-Bellay
Paris 4°, France M 1945

MORROW, J. Lloyd(M.D.)
197 Passaic Avenue
Passaic, N. J. M 1943

MOTZ, Gerald
4153 Telephone Road
Houston 17, Texas M 1954

MUELLER, Adolph R.(M.D.)
516 S. Fifth Street
Leavenworth, Kans. M 1943

MUELLER, Mrs. Agnes
Low Road Farm
Sharon, Conn. M 1951

MUENCH, George(Ph.D.)
San Jose State College
San Jose, Calif. M 1946

MULLEN, Miss Esther
10 Downing Street
New York 14, N. Y. M 1950

*MUNROE, Ruth (Ph.D.)
130 E. 67th Street
New York, N. Y. F 1940

MURPHY, Rev. Kenneth
26 S. Center Street
Springfield, Ohio Aff. 1954

MURPHY, Lois Barclay(Ph.D.)
Menninger Foundation
Topeka, Kansas M 1941

MURRAY, Henry (M.D.)
48 Mt. Auburn Street M 1948
Cambridge 38, Mass. F 1950

NAGELBERG, Leo(Ph.D.)
3900 Greystone Avenue
New York 63, N. Y. M 1952

NAPOLI, Peter J.(Ed.D.)
Crompond Road
R.F.D. 2 M 1949
Yorktown Heights, N. Y.

NEU, Ruth A. Warburg
311 E. 72nd Street
New York 21, N. Y. M 1953

NEWMAN, Joseph(Ph.D.)
Veterans Adm. Hospital
1025 E. H. Crump Boulevard
Memphis 44, Tenn. M 1950

NICHOLAS, Alma L.
200 Retreat Avenue
Hartford 2, Conn. M 1954

NIKEL, Frank
980 Cherry Street
Phoenixville, Pa. M 1948

NORTHCOTT, Hollie
Department of Psychology
Agnews State Hospital
Agnew, Calif. M 1954

NOSAL, Walter S.(Ed.D.)
John Carrol University
Cleveland 18, Ohio M 1954

NUNEZ, Dr. Raphael
Hospital Infantil
Departamento de Psiquiatria
Calle Del Dr. Norma
Mexico 7, D. F. M 1954

OCHROCH, Ruth
656 W. 162nd Street
New York 32, N. Y. M 1950

ODERBERG, Lt. Phillip
442 N. Croft Avenue
Los Angeles 48, Calif. M 1954

ODOM, Charles L.(Ph.D.)
602 Carondelet Building
New Orleans 12, La. M 1949

OETTINGER, Mrs. Malcolm
R.F.D. 2
Harrisburg, Pa. M 1945

OLINGER, Leonard Bennett
1280 N. Harper Ave. (Ph.D.)
Hollywood 46, Calif. M 1954

OPPENHEIM, Mrs. Sadi
120 Riverside Drive
New York 24, N. Y. M 1947

ORGEL, Sidney A.
Drawer 508
Norwich State Hospital
Norwich, Conn. M 1952

OSSORIO, Abel Garcia(Ph.D.)
Department of Psychology
Washington University
St. Louis, Mo. M 1951

PAPANIA, Ned
13238 N. Norfolk
Detroit 35, Mich. M 1954

PARNICKY, Joseph J.
School of Social Work
Adelphi College
Garden City, N. Y. M 1949

PARSONS, Rosa F.
319 Columbia Street
San Diego 1, Calif. M 1947

*PAULSEN, Alma A.(Ph.D.)
416 W. 20th Street
New York 11, N. Y. F 1940

PAYNE, David H.(Ph.D.)
1127 Wilshire Boulevard
Los Angeles 17, Calif. M 1950

PEAK, Horace M.
Psychology Department
Patton State Hospital
Patton, Calif. M 1949

PEATMAN, Mrs. Lillie B.
104 Beach Avenue
Larchmont, N. Y. M 1944

PEMBERTON, W. H.(Ed.D.)
481 Summit Avenue
Mill Valley, Calif. M 1941

PENA, Cesareo D.(Ph.D.)
South Street
Williamsburg, Mass. M 1951

PENNINGROTH, Paul W.
Child Guidance Clinic (Ph.D.)
of Pinellas County
757 Fourth Street, N.
St .Petersburg 2, Fla. M 1943

PERCIVAL, Harry F.(Ed.D.)
State Teachers College
Fitchburg, Mass. M 1953

PETERS, Marie Wilson
6144 Wayne Avenue M 1947
Philadelphia 44, Pa. F 1951

PHILLIPS, Mrs. Allvertta B.
3561 N. Pennsylvania Street
Indianapolis 5, Ind. M 1950

*PIOTROWSKI, Zygmunt A.
Box 1000 (Ph.D.)
Princeton, N. J. F 1940

PLATT, Henry(Ph.D.)
Devereux Schools
Devon, Pa. M 1950

PLITTMAN, Jack C.
Psychology Department
Patton State Hospital
Patton, Calif. M 1951

PORTER, Mrs. Lucille S.
278 First Avenue
New York 9, N. Y. St. Aff. 1953

POSER, Ernest George(Ph.D.)
Department of Psychology
McGill University
3600 McTavish Street M 1950
Montreal, P.Q., Canada F 1953

PRADOS, Miguel(M.D.)
McGill University
3801 University Street
Montreal, Que., Can. M 1942

PRICE, Marian Gale
854 S. Euclid
Pasadena 5, Calif. M 1953

PROCTOR, Paul W.(Ph.D.)
145 Bleecker Street
New York 12, N. Y. M 1951

PUZZO, Frank S.
130-52 232nd Street
Laurelton, N. Y. M 1949

QUAYLE, Margaret S.(Ph.D.)
27 Parkview M 1950
Tuscaloosa, Ala. F 1952

RADTKE, William L.
310 Romano Avenue
Coral Gables 34, Fla. M 1954

*RAPAPORT, David (Ph.D.)
Austen Riggs Center
Stockbridge, Mass. F 1940

RAPKIN, Maurice(Ph.D.)
Los Angeles Psychological
Service Center
269 S. Loma Drive
Los Angeles 26, Calif. M 1952

RAPPAPORT, Sheldon R.
63-1 Drexelbrook Dr. (Ph.D.)
Drexel Hill, Pa. M 1951

RAPPAPORT, Sidney M.(Ph.D.)
Lakeside Apartments
Melrose Park 26, Pa. M 1949

RAUB, Edwin S.
141 Fairfax Road
Rosemont, Pa. M 1952

RECORD, Father Maurice A.
Assumption College
Windsor, Ont., Can. M 1954

REED, Philip B.(M.D.)
1820 E. Tenth Street
Indianapolis 1, Ind. M 1949

REICHARD, Suzanne(Ph.D.)
1075 Cragmont Avenue
Berkeley, Calif. M 1941

REICHENBERG-HACKETT,
Wally(Ph.D.)
c/o Department of Psychology
Duke University
Durham, N. C. M 1948

REINTHAL, Mrs. Mary E.
3341 Medina Line Road
West Richfield, Ohio M 1951

REIS, Walter J.(Ph.D.)
221 Mt. View Street
Decatur, Ga. M 1943

REITZ, Mrs. Edna Maisner
4074 Tuxedo
Detroit 4, Mich. M 1953

REITZELL, Mrs. Jeanne M.
500 S. Arroyo Boulevard
Pasadena 2, Calif. M 1949

RIBEIRO, Dr. Rene
Rua Henrique Dias 271
Recife
Pernambuco, Brazil M 1951

RICHARDS, T. W. (Ph.D.)
Dept. of Neuropsychiatry
Louisiana State University
School of Medicine M 1942
New Orleans 12, La. F 1954

***RICKERS-OVSIANKINA, M.**
Univ. of Connecticut (Ph.D.)
Storrs, Conn. F 1940

RISCH, Frank (Ph.D.)
10722½ Francis Place
Los Angeles 34, Calif. M 1949

RITCHEY, Hardin (M.D.)
3015 Seventh Avenue, S.
Birmingham, Ala. M 1953

***RITEY, Hector J.** (M.D.)
815 Park Avenue
New York 21, N. Y. M 1940

***RIVERS, Mrs. Hubert M.**
111 Mitchell Drive
Pittsburgh 28, Pa. M 1940

ROBINSON, Elizabeth Foster
Central Child Guidance Service
101 Bradley Memorial
University Hospitals
Madison, Wisc. M 1954

ROCKBERGER, Harry (Ph.D.)
Veterans Hospital
East Orange, N. J. M 1954

RODAN, Mrs. Henrietta Itta
515 E. 85th Street
New York 28, N.Y. St. Aff. 1954

ROGERS, Lawrence S. (Ph.D.)
1046 Madison Street M 1949
Denver 6, Colo. F 1954

RORSCHACH, Mme. Olga
c/o Hans Huber Honorary
Bern, Switzerland M 1954

ROSEN, Esther Katz (Ph.D.)
1810 Rittenhouse Sq. M 1945
Philadelphia 3, Pa. F 1951

ROSENBERG, Israel H.
89-38 Whitney Avenue M 1953
Elmhurst 73, L. I., N. Y.

ROSNER, Stanley
12 Wendover Road
Yonkers, N. Y. M 1954

ROSS, M. Eleanor
Tri-County Mental
Health Clinics M 1944
Norristown, Pa. F 1949

***ROSS, W. Donald** (M.D.)
Department of Psychiatry
Cincinnati General Hospital
Cincinnati 29, Ohio F 1940

ROTMAN, Saul R. (Ph.D.)
Veterans Adm. Hospital
Sunmount, N. Y. M 1947

RUHL, Mrs. R. Ernest
817 Chestnut Street
Mifflinburg, Pa. M 1947

RUJA, David H. (Ph.D.)
954 N. Vermont Avenue
Los Angeles 29, Calif. M 1949

RUSSELL, Howard
9426 S. Van Ness Avenue
Los Angeles 47, Calif. M 1954

***RYMER, Charles A.** (M.D.)
209 E. 16th Street
Denver, Colo. F 1940

ST. CLAIR, Walter F. (Ed.D.)
999 Mammoth Road
Manchester N. H. M 1943

SALTZMAN, Marguerite R.
2533 S. 21st Street
Philadelphia 45, Pa. M 1950

SALTZMAN, Sara
7012 Wilson Lane
Bethesda 14, Md. M 1950

SALZMAN, Mrs. Anne
939 N. Hoover
Los Angeles 29, Calif. M 1953

SANDER, Emilie T.
657 W. 161st Street
New York, N. Y. M 1950

SANDERSON, Herbert (Ph.D.)
166 Hartford Avenue
Kenmore 23, N. Y. M 1952

SANFORD, R. Nevitt (Ph.D.)
Department of Psychology
Univ. of California M 1948
Berkeley, Calif. F 1950

SARASON, Mrs. Esther K.
Institute of Human Relations
Yale University
333 Cedar Street
New Haven, Conn. M 1944

SARASON, Seymour B. (Ph.D.)
Institute of Human Relations
Yale University
333 Cedar Street
New Haven, Conn. M 1944

SARGENT, Helen D. (Ph.D.)
2025 Westwood Drive M 1945
Topeka, Kans. F 1950

SCHACHT, Mrs. Leatrice Styrt
5 Avis Drive
New Rochelle, N. Y. M 1950

SCHACHTEL, Ernest G.
299 Riverside Drive
New York 25, N. Y. F 1951

SCHACHTEL, Mrs. Zeborah
299 Riverside Drive
New York 25, N. Y. M 1953

SCHAFER, Roy (Ph.D.)
School of Medicine
Yale University
333 Cedar Street
New Haven, Conn. M 1953

SCHANBERGER, William J.
305 Veri Avenue
Pittsburgh 20, Pa. M 1954

SCHATTMAN, Mrs. Esther
Preger
210 E. 68th Street
New York 21, N. Y. M 1950

SCHERER, I. W. (Ph.D.)
Veterans Administration
Northampton, Mass. M 1949

SCHILLINGER, Morton
220 W. 98th Street
New York 25, N. Y. M 1953

***SCHLESINGER, Mrs. Alicia de**
Solis 155, VIII/A M 1940
Buenos Aires, Argentina

SCHMIDL, Fritz (M.S., Dr. Jur.)
539 32nd Avenue, S. M 1942
Seattle 44, Wash. F 1945

SCHNEIDER, Stanley F. (Ph.D.)
Psychology Department
University of Michigan
Ann Arbor, Mich. M 1954

SCHONBAR, Rosalea Ann
3382 171st Street (Ph.D.)
Flushing 58, N. Y. M 1943

SCHUBERT, Herman J. P.
Route No. 2 (Ph.D.)
Williamsville 21, N.Y. M 1950

SCHULMAN, Doris
10 Downing Street
New York 14, N. Y. M 1948

SCHULMAN, Irving (Ph.D.)
100 Charles Drive
Bryn Mawr, Pa. M 1952

SCHUMACHER, Audrey Sims
400 Kentucky Ave. (Ph.D.)
Berkeley, Calif. M 1941 F 1949

SCHUMACHER, Henry C.
400 Kentucky Avenue (M.D.)
Berkeley, Calif. M 1941

SCHUPPER, Fabian X.
VA Regional Office
95 Pearl Street
Hartford, Conn. M 1954

SCHWARTZ, Arthur A.
251 Central Park West
New York 24, N. Y. M 1951

SCHWARTZ, Emanuel K.
12 E. 87th St. (Ph.D., D.S. Sc.)
New York 28 M 1949
New York F 1952

SCHWERIN, Mrs. Erna
2000 Shawnee Boulevard
Lima, Ohio M 1950

SEIDENFELD, Morton A. (Ph.D.)
National Foundation for
Infantile Paralysis
120 Broadway M 1944
New York 5, N. Y. F 1954

SEILER, Mrs. Geraldine F.
The Embassy
2100 Walnut Street M 1946
Philadelphia 3, Pa. F 1950

SEITZMAN, Daniel
2387 Ocean Avenue
Brooklyn 29, N. Y. M 1949

SELIG, Kalman
188 Clinton Avenue
Newark 5, N. J. M 1950

SELTZER, Samuel M.
17 Park Avenue
Lancaster, N. Y. M 1954

SEYMOUR, Charlyne T. (Ph.D.)
11 69th Place
Long Beach 3, Calif. M 1952

SHACKETT, Mrs. Sara Evre
R.F.D.
Robles del Rio, Calif. M 1942

SHANE, S. Gerald
4571 Sherbrocke St. M 1949
Westmount, P.O., Canada

SHAPERO, Mrs. Amy Miller
34 Hubbard Avenue
Stamford, Conn. M 1949

SHAPIRO, David (Ph.D.)
Austen Riggs Foundation
Stockbridge, Mass. M 1950

SHAPIRO, Mrs. Irene
180 E. 17th Street
Brooklyn 26, N. Y. M 1950

SHARPE, Susie McMillan (Ph.D.)
46 W. 4th Street
Mt. Vernon, N. Y. M 1948

SHEEHAN, Joseph (Ph.D.)
Department of Psychology
University of California
Los Angeles 24, Calif. M 1952

SHNEIDMAN, Edwin S. (Ph.D.)
114-15 Rose Avenue M 1949
Los Angeles 34, Calif. F 1951

SHOBEN, Edward J., Jr. (Ph.D.)
Teachers College
Columbia University
New York 27, N. Y. M 1952

SHOR, Joel (Ph.D.)
103 E. 86th Street
New York 28, N. Y. M 1945

SIEGEL, Edward L. (Ph.D.)
606 E. Raynor Avenue
Syracuse, N. Y. M 1950

SIEGEL, Max (Ph.D.)
58-32 210th Street
Bayside, N. Y. M 1949

SIEGEL, Miriam G. (Ph.D.)
57 E. 90th Street M 1942
New York 28, N. Y. F 1949

SIMKIN, James S. (Ph.D.)
489 Summit Avenue
Maplewood, N. J. M 1952

SINGER, Roland H.
529 Wiconisco Street
Harrisburg, Pa. M 1953

SKEELS, Dell
16241 11th Street, N.E.
Seattle, Wash. Aff. 1954

SLESS, Bernard
225 Upland Road
Merion, Pa. M 1952

SMITH, Mrs. Margaret J.
Mendota State Hospital
Madison 9, Wisc. M 1950

SMOLINSKY, Harold J. (Ph.D.)
121 Price Street
West Chester, Pa. M 1952

SNOWDEN, Robert F.
1380 Circle Drive
San Marino, Calif. M 1953

SNYDER, Mrs. Marguerite A.
96 Sampson Avenue
Pittsburgh 5, Pa. M 1952

SOBOL, Albert L. (Ph.D.)
26 W. 9th Street M 1949
New York 11, N. Y. F 1954

SOMMERS, Vita Stein (Ph.D.)
981 S. Westmoreland
Los Angeles 6, Calif. M 1946

SOSNOFF, Mrs. Miriam
1895 Grand Concourse
New York 53, N.Y. St. Aff. 1953

SPANEY, Emma (Ph.D.)
Queens College
Flushing 67, N. Y. M 1949

SPENCER, Mrs. Betty L.
813 Seventh Street
Huntington, W. Va. M 1951

SPIEGELMAN, Marvin (Ph.D.)
1596 Hanover Street M 1953
Aurora, Denver 8, Colo.

SPIN, Mrs. Lillian
500 E. 56th Street
Brooklyn 3, N. Y. M 1950

SPINDLER, Mrs. Joan Elizabeth
5833 McLynn Avenue M 1948
Montreal 29, Quebec, Canada

SPIRES, Alan M.
Mental Health Clinic
5 Hazen Avenue M 1954
Saint John, N.B., Canada

SPITZER, Paul S.
P.O. Box 100
Perkins, Calif. M 1951

STANFORD, Margaret J.
Sonoma State Hospital
Eldridge, Calif. M 1950

STANTON, Mrs. Harriet
15 Livermore Road M 1942
Wellesley Hills 82, Mass.

STAVRIANOS, Mrs. Bertha K.
823 Ingleside Place
Evanston, Ill. M 1943

STEEN, Thomas W. (Ph.D.)
Box 1112
Collegedale, Tenn. M 1954

STEINER, Matilda F.
220 Brookdale Avenue M 1943
Newark 6, N. J. F 1946

STEINER, Meta (Ph.D.)
40-70 Hampton Street M 1948
Elmhurst 73, N. Y. F 1950

STEINZOR, Bernard (Ph.D.)
Sarah Lawrence College
Bronxville, N. Y. M 1943

STEISEL, Ira M. (Ph.D.)
Psychiatric Clinic for Children
University of Washington
Seattle 5, Wash. M 1951

STENDEL, Mrs. Kathleen
Westwood-Wilshire Building
1245 Glendon Avenue
Los Angeles 24, Calif. M 1950

STEPHENS, Gordon M. (M.D.)
189 Kingsley Avenue
Winnipeg, Man., Can. M 1941

STERN, Mrs. Phyllis Glaser
2115-B S. John Russell Circle
Elkins Park 17, Pa. M 1952

STERNE, Spencer B.
Department of Psychology
Wayne County General Hosp.
Eloise, Mich. M 1953

STEWART, Barbara M. (Ph.D.)
267 S. New Hampshire
Los Angeles 4, Calif. M 1949

STONE, Irving R.
State Mental Hygiene Clinic
3525 Fourth Avenue
San Diego 3, Calif. M 1951

*STONE, L. Joseph (Ph.D.)
Vassar College M 1940
Poughkeepsie, N. Y. F 1951

STONESIFER, Fred A.
208 N. Broad Street
Selinsgrove, Pa. M 1951

STOOPS, Mrs. Wanda Rah
3258 N. New Jersey Street
Indianapolis 5, Ind. M 1949

STOPOL, Murray S. (Ph.D.)
Hamm Memorial Psych. Clinic
611 Hamm Building
St. Paul 2, Minn. M 1953

STOTZ, Marion
408 Valencia Avenue
Coral Gables, Fla. M 1953

STRAIT, Bennett
38 N. Seventh Street
Stroudsburg, Pa. M 1950

STRAUSS, Mrs. Elsa L.
3819 Dakota Street
Cincinnati, Ohio M 1951

STRUTHERS, Alice Ball (Ph.D.)
2501 Palos Verdes Drive, N.
Palos Verdes Estates
California M 1949

SUESSMILCH, Frederick L.
141 Lafayette Avenue M 1946
Brooklyn 38, N. Y. F 1951

SULZER, Edward S.
311 Ogden Lane
San Antonio, Tex. St. Aff. 1954

SWIFT, Joan Woodcock (Ph.D.)
5628 S. Blackstone Avenue
Chicago 37, Ill. M 1945

SYMONDS, Percival M. (Ph.D.)
Teachers College
Columbia University M 1950
New York 27, N. Y. F 1951

TABIN, Johanna Krout (Ph.D.)
316 W. Barry
Chicago 14, Ill. M 1952

TALLENT, Norman (Ph.D.)
12 N. Cypress Street
East Hampton, Va. M 1953

*TALLMAN, Gladys
Kent, Conn. F 1940

TAULBEE, Dr. Earl S.
Psychology Department
Norfolk State Hospital
Norfolk, Nebr. M 1953

*TEICH, Mrs. Marianne
2040 McGraw Avenue
Bronx 62, N. Y. M 1940

TENNEY, Edward V. (Ph.D.)
735 Holland Avenue
Fresno, Calif. M 1948

TOLMACH, Mrs. Regina E.
16 W. 77th Street
New York 24, N. Y. M 1949

TOLMAN, Ruth S. (Ph.D.)
345 S. Michigan Ave. M 1949
Pasadena 5, Calif. F 1950

TOMKINS, Silvan S. (Ph.D.)
36 College Road
Princeton, N. J. M 1948

TOPPING, Mrs. Robert C.
355 Scarsdale Road
Tuckahoe, N. Y. M 1948

TOWNSEND, Mrs. Marjorie M.
Plainfield, Vt. M 1949

TRACHTMAN, Gilbert M.
1017 46th Street
Brooklyn 19, N. Y. M 1954

TREAT, Wolcott C.
5027 Campanile Drive
San Diego 15, Calif. M 1953

*TUFT, Carlyn M. (Ph.D.)
4613 Larchwood Avenue
Philadelphia, Pa. M 1940

VACCARO, J. John (Ph.D.)
105-34 63rd Avenue
Forest Hills 75, N. Y. M 1951

VAN ALSTYNE, Dorothy (Ph.D.)
1725 17th Street, N.W.
Washington 9, D.C. M 1949

VANDENBERG, Steven G.
Institute of Human Biology
1135 E. Catherine
Ann Arbor, Mich. M 1951

VAN WEST, Mrs. Joan
193-22 109th Avenue
Hollis, N. Y. St. Aff. 1954

VAYHINGER, John M.
Mental Health Clinic
527 W. Colfax
South Bend 1, Ind. M 1952

VINSON, David (Ph.D.)
517 S. Post Oak Lane
Houston 19, Texas M 1949

VORHAUS, David
27 W. 86th Street Honorary
New York 24, N. Y. M 1954

VORHAUS, Pauline G. (Ed.D.)
27 W. 86th Street M 1941
New York 24, N. Y. F 1944

WAGNER, Mazie Earle (Ph.D.)
Route 2
Williamsville 21, N. Y. M 1950

WALKER, Robert G. (Ph.D.)
Old Main Street
Marshfield Hills, Mass. M 1952

WALLEN, Richard W. (Ph.D.)
Department of Psychology
Western Reserve University
Cleveland 6, Ohio M 1953

WALTON, Mrs. Norma R.
142-C River Terrace Drive
East Lansing, Mich. M 1949

WARNER, Samuel J. (Ph.D.)
216 E. 70th Street
New York 21, N. Y. M 1953

WARREN, Lurene Z.
445½ Michigan
Petoskey, Mich. M 1949

WARSHAWSKY, Mrs. Florence
2889 Torrington Road
Shaker Heights, Ohio M 1949

WEINREBE, Claire
225 E. 11th Street
New York 3, N. Y. St. Aff. 1953

WEIR, John R. (Ph.D.)
2841 Highview Avenue
Altadena, Calif. M 1954

WEISS, Emalyn R.
832 Centre Avenue
Reading, Pa. M 1950

WEISS, Herman R. (Ph.D.)
1277 E. 48th Street
Brooklyn, N. Y. M 1953

WEISS, Sheldon W.
520 Carbondale Road
Waymart, Pa. M 1951

WEISSKOPF-JOELSON, Edith
Dept. of Psychology (Ph.D.)
Purdue University M 1943
Lafayette, Ind. F 1951

WEISSMAN, Serena
468 Riverside Drive
New York 27, N. Y. M 1950

WELLS, Frederick Lyman (Ph.D.)
13 Holyoke Street (Honorary)
Cambridge 38, Mass. M 1950

WENGATE, Pauline
The Gables
Andalusia, Ala. M 1950

WENTLING, Verda M.
15 Elk Street M 1950
Hempstead, L. I., N. Y.

WENTWORTH-ROHR, Ivan
123 Waverly Place (Ph.D.)
New York 11, N. Y. M 1950

WERNER, Kathryn
321 W. 11th Street
New York 14, N. Y. M 1952

WEXLER, Rochelle M.
1938 E. 12th Street
Brooklyn 29, N. Y. M 1949

WHITE, Mrs. Helen Cecelia
1025 Worsham Drive
Whittier, Calif. M 1950

WHITENACK, Betty
1211 Bolton
Baltimore, Md. M 1952

WHITMAN, Roy M. (M.D.)
333 E. Huron Street
Chicago 11, Ill. M 1954

WHITSELL, Leon J. (M.D.)
52 Shore View Avenue M 1942
San Francisco 21, Calif.

WICKERSHAM, Francis Myron
U.S.P.H.S.H. (Ph.D.)
Fort Worth, Texas M 1952

WIGDOR, Blossom T. (Ph.D.)
5580 Gatineau Avenue M 1949
Montreal, Quebec, Canada

WILCOX, George T.
The Evergreens
R.D. 1
State College, Pa. St. Aff. 1954

WILKINS, Mrs. Verna M.
Mother Goose Nursery School
9500 Warren Street
Silver Springs, Md. M 1950

WILLIAMS, Gertha (Ph.D.)
17211 Buckingham Dr. M 1944
Birmingham, Mich. F 1949

WILLIAMS, Mrs. Gertrude J.
6027 Etzel Avenue
St. Louis 12, Mo. St. Aff. 1954

WILLIAMS, Helen E. (Ed.D.)
Division of Neuropsychiatry
U.S. Naval Hospital
St. Albans, L. I., N. Y. M 1950

WILLIAMS, Mrs. Jessie M.
Griffins
Abinger Hammer
Nr. Dorking, England M 1950

WILLIAMSON, Margaret O.
4 Bayview Place
Staten Island 4, N. Y. M 1945

WILSON, Mary T.
P.O. Box 577
Amsterdam, N. Y. M 1944

WITZEMAN, S. Evangeline
5021 Hawkins Road (Ph.D.)
West Richfield, Ohio M 1952

WOLF, Klara C. (Ph.D.)
Inhurst House
Baughhurst, Nr. Basingstoke
Hants, England M 1951

WOLF, S. Jean (Ph.D.)
220 Fifth Avenue
New York 1, N. Y. M 1944

*WOLFSON, Mrs. Ruth
124 W. 79th Street
New York 24, N. Y. F 1940

WOLPE, Zelda S. (Ph.D.)
152 S. Lasky Drive
Beverly Hills, Calif. M 1950

WOLTMANN, Adolf G.
147 E. 81st Street
New York 28, N. Y. M 1949

WOOD, Austin B. (Ph.D.)
810 E. 19th Street
Brooklyn 30, N. Y. M 1943

WOOLF, Henrietta K.
3345 Dent Place, N.W.
Washington 7, D.C. M 1950

WRIGHT, M. Erik (M.D.)
Department of Psychology
University of Kansas
Lawrence, Kans. M 1943

WYATT, Frederick (Ph.D.)
1027 E. Huron Street M 1948
Ann Arbor, Mich. F 1949

YUDIN, Sidney
Department of Psychology
Bellevue Psych. Hospital
New York, N. Y. M 1952

ZADEK, Mildred A.
131 Lincoln Road
Brooklyn 25, N. Y. M 1949

ZAVINSKY, Mrs. Almena Parker
APO 937, c/o Postmaster
Seattle, Wash. M 1951

ZIERER, Dr. Ernest
42-05 Layton Street
Elmhurst, L. I., N. Y. M 1952

ZIMMERMAN, Irla Lee
2422 Federal
Los Angeles 64, Calif. M 1949

ZUCKER, Mrs. Luise J.
276 Riverside Drive M 1945
New York 25, N. Y. F 1950

NEW MEMBERS

ELECTED ON FEBRUARY 27, 1955

FELLOWS

ABRAMSON, Leonard S. (Ph.D.)
VA Hospital
East Orange, N. J.

CASSELL, Russell N. (Ph.D.)
305 Wabash Ave.
Belleville, Ill.

IVES, Margaret (Ph.D.)
St. Elizabeths Hospital
Washington 20, D. C.

KASS, Walter (Ph.D.)
Menninger Foundation
Topeka, Kan.

MATHEWS, W. Mason (Ph.D.)
71 E. Ferry Ave.
Detroit 2, Mich.

MILLER, Carmen (Ph.D.)
5935 Colhurst
Dallas, Texas

RABIN, Albert I. (Ph.D.)
Michigan State College
East Lansing, Mich.

SCHAFER, Roy (Ph.D.)
333 Cedar St.
New Haven, Conn.

ZEICHNER, Abraham M. (Ph.D.)
Connecticut State Hospital
Middletown, Conn.

ASSOCIATES

ARNHOFF, Franklyn N. (Ph.D.)
Nebraska Psychiatric Institute
College of Medicine
Omaha, Nebr.

BERRICK, Myron (Ph.D.)
1086 Ocean Ave.
Brooklyn 30, N. Y.

BLAU, Theodore H. (Ph.D.)
420 W. Lafayette St.
Tampa, Fla.

COHEN, Bernard B.
29 Erringer Place Apt.
Philadelphia 44, Penna.

D'ANGELO, Rita Y.
2604 University Ave.
Bronx 68, N. Y.

GLASS, Blanche
Box W
Newton, Conn.

GORDON, Edward M. (Ph.D.)
162-41 Powells Cove Blvd.
Beechhurst 57, N. Y.

HEBERT, Bernard
P.O. Box 614
Digby, Nova Scotia, Canada

HIGBEE, Dale S. (Ph.D.)
South Carolina State Hospital
Columbia, S. C.

KAVKEWITZ, Henry (Ph.D.)
1060 Union St.
Brooklyn 25, N. Y.

KITAY, Philip M. (Ph.D.)
8707 35th Ave.
Jackson Heights 72, N. Y.

LAMPL, Henry M.
94 Fairmont Ave.
Kingston, N. Y.

LAWRENCE, Ernest S. (Ph.D.)
Pacific State Hospital
Spadra, Calif.

LAWRENSON, Thomas J.
319 E. 197th St.
Bronx 58, N. Y.

MARSH, James T. (Ph.D.)
3274 Sawtelle Blvd.
Los Angeles 34, Calif.

McBRIDE, John L.
1112 Stewart Dr.
Williamsburg, Va.

MILLER, Cecil R.
1762 Malcolm St.
Los Angeles 24, Calif.

NEUMAN, Gerard G. (Ph.D.)
Dept. Preventive Medicine
University of Utah
Salt Lake City 1, Utah

RABINOVITCH, M. Sam (Ph.D.)
Dept. of Psychology
Children's Memorial Hospital
Montreal 25, Canada

REISEL, Jerome
10705½ Strathmore Dr.
Los Angeles 24, Calif.

SOSNOFF, Miriam
975 Sherman Ave.
Bronx 56, N. Y.

WRIGHT, Morgan (Ph.D.)
Medical Arts Clinic
Regina, Saskatchewan, Canada

STUDENT AFFILIATES

BINGHAM, David S.
Box 21
West Wellington, Conn.

KAHN, Robert
Dept. of Psychology
Pennsylvania State University
State College, Penna.

KIDORF, Irwin W.
6 Preston Court
Lexington, Ky.

STERNBERG, Dave
c/o Wentworth-Rohr
1 Fifth Ave.
New York 3, N. Y.

WATERS, Thomas J.
Huntington Lake
Southampton, Penna.

GEOGRAPHICAL DIRECTORY OF MEMBERSHIP OF THE SOCIETY FOR PROJECTIVE TECHNIQUES

UNITED STATES AND TERRITORIES

ALABAMA

Quayle, Margaret S.
Ritchey, Hardin
Wengate, Pauline

ARIZONA

Canter, Aaron H.

CALIFORNIA

Baker, Gertrude
Bauer, Johanna R. G.
Bradway, Katherine
Campion, John
Cole, Joseph
Davison, Arthur H.
De Vault, Helen C.
Everett, Evalyn G.
Gering, Evelyn
Pemberton, W. H.
Shackett, Sarah
Snowden, Robert F.
Spitzer, Paul S.
Stanford, Margaret
Struthers, Alice Ball
Tenney, Edward Vernon
White, Helen Cecelia

Agnew
Dunlap, Dorothy
Northcott, Hollie

Altadena
Brozovich, Stanley M.
Weir, John R.

Berkeley
Inman, John M.
Kelley, Douglas M.
Reichard, Suzanne
Sanford, R. Nevitt
Schumacher, Audrey S.
Schumacher, Henry C.

Beverly Hills
Johnson, Theresa
Wolpe, Zelda S.

Carmel
Crile, Mary
Klopfer, Bruno

El Monte
Ericson, Helen
Malm, Mildred

Long Beach
Kirkner, Frank J.
Seymour, Charlyne T.

Los Angeles
Armon, Mary Virginia
Brandt, Rudolph J.
Buhler, Charlotte
Dryselius, Harold
Eiduson, Bernice T.
Enochs, Neil
Evans, Ray B.
Farberow, Norman L.
Feifel, Herman
Fichman, Lionel
Fils, David
Forer, Bertram R.
Forer, Lucille K.
Hays, Berta
Hodson, Evelyn T.
Howard, Stephen J.
Joel, Walther
Lakin, Harriet A.
Lucas, Winafred
Manson, Morse P.
McDonald, Franklin R.
Meyer, Mortimer M.
Miller, Cecil R.
Oderberg, Phillip
Olinger, Leonard
Payne, David H.
Rapkin, Maurice
Risch, Frank
Ruja, David H.
Russell, Howard
Salzman, Anne
Sheehan, Joseph
Shneidman, Edwin S.
Sommers, Vita Stein
Stendel, Kathleen
Stewart, Barbara M.
Zimmerman, Irla Lee

North Hollywood
Anderson, Dorothy V.
Grayson, Harry M.
Lewis, Robert T.

Oakland
Due, Floyd O.
Elliott, Merle H.
Little, Jack F.

Pasadena
Diamond, Florence
Korda, Geraldine J.
Morgan, David W.
Price, Marian G.
Reitzell, Jeanne M.
Tolman, Ruth

Patton
Peak, Horace M.
Plittman, Jack C.

San Diego
Heisler, Verda
Lockwood, Wallace V.
Montalto, Fannie D.
Parsons, Rosa F.
Stone, Irving R.
Treat, Wolcott C.

San Francisco
Bridgman, Olga
Fisher, Jerome
Harris, Robert E.
Korner, Anneliese F.
Matli, Elsie
Meyer, George
Whitsell, Leon

San Jose
Burton, Arthur
Mehr, Helen Margulies
Muench, George

Santa Barbara
Cartwright, Robert W.
Clapp, Hazel S.

COLORADO

Denver
Billings, Edward G.
Fehrenbach, Alice R.
Fortin, Claire
Rogers, Lawrence S.
Rymer, Charles A.
Spiegelman, Marvin

CONNECTICUT

Barbara, Peter Paul
Hemmendinger, Larry
Holmes, Frances B.
Holzberg, Jules D.
Johnson, Lawrence J.
Mueller, Agnes
Orgel, Sidney A.
Rickers-Ovsiankina, Maria
Tallman, Gladys

Hartford
Fischer, Liselotte K.
Nicholas, Alma L.
Schupper, Fabian

New Haven
Ames, Louise Bates
Hellersberg, Elizabeth
Klatskin, Ethelyn H.
Sarason, Esther K.
Sarason, Seymour B.
Schafer, Roy

Stamford
Kahn, David F.
Shapero, Amy Miller

DELAWARE

Blessing, Harold D.
Grossman, Searles

FLORIDA

Allen, Robert M.
Flemming, Edward
Fuller, Paul
Kelsey, Howard Phelps
Radtke, William
Stotz, Marion

St. Petersburg
Brodie, Dorothy B.
Pennington, Paul W.

GEORGIA

Hughes, Robert M.
Reis, Walter J.

ILLINOIS

Barrell, Robt. P.
Brunschwig, Lily
Cassel, Russel N.
Klass, Walter K.
Stavrianos, Bertha

Chicago
Beck, Samuel J.
Bernstein, Hilde R.
Fromm, Erika O.
Handel, Gerald
Henry, William E.
Hilkevitch, Rhea R.
Krout, Maurice H.
Lundin, William
Moore, Harriet Bruce
Swift, Joan Woodcock
Tabin, Johanna Krout
Whitman, Roy M.

INDIANA

Diana, Pearl Butler
Gibby, Robert G.
Vayhinger, John M.
Weisskopf-Joelson, Edith

Indianapolis
Graves, Winifred S.
Phillips, Allverta
Reed, Philip S.
Stoops, Wanda Rah

IOWA

Dingman, Paul R.

KANSAS

Mueller, Adolph R.

Lawrence
Beale, Elizabeth
Wright, M. Erik

Topeka
Hallow, William C.
Murphy, Lois Barclay
Sargent, Helen

KENTUCKY

Krasner, Leonard

LOUISIANA

New Orleans
Bourke, William
Crovetto, Lorraine
Font, Marion McKenzie
Fosberg, Irving A.
Odom, Charles L.
Richards, T. W.

MAINE
Hoch, Erasmus L.

MARYLAND
Guertin, Wilson H.
Hawkins, Hermione
Imre, Paul
Kendig, Isabelle V.
Wilkins, Verna M.

Baltimore
Farley, Julie
Feldberg, Theodore M.
Finn, Michael H. P.
Whitenack, Betty

Bethesda
Molish, Herman B.
Saltzman, Sara

Sykesville
Abrams, Julian
Guy, William

MASSACHUSETTS
Bell, John E.
Evans, John T.
Friend, Jeanette G.
Gilbert, Raymond R.
Kalant, Mrs. Lee
Kotkov, Benjamin
Lawrence, James F.
Lebeaux, Thelma
Pena, Cesareo D.
Percival, Harry F.
Scherer, I. W.
Stanton, Harriet
Walker, Robert G.

Cambridge
Hanfmann, Eugenia
Murray, Henry
Wells, Frederick Lyman

Stockbridge
Rapaport, David
Shapiro, David

MICHIGAN
Brown, Martha
Hand, Mary Ella
Housman, Harold S.
Leonard, A. T.
Sterne, Spencer B.
Walton, Norma R.
Warren, Lurene Z.
Williams, Gertha

Ann Arbor
Hutt, Max L.
Schneider, Stanley F.
Vandenberg, Steven
Wyatt, Frederick

Detroit
Barahal, George D.
Brownfain, John J.
Clapp, Chester D.
Dryzer, Evelyn F.
Feinberg, Henry
Kellman, Samuel
Longley, James L.
Mather, Elsie D.
Mathews, W. Mason
Milstein, A. Freda
Papania, Ned
Reitz, Edna Maisner

MINNESOTA

St. Paul
Herness, Christina
Stopol, Murray S.

MISSOURI
Geil, George A.
Hilden, Arnold H.

St. Louis
McPherson, Marion White
Ossorio, Abel Garcia
Williams, Gertrude J.

NEBRASKA

Lincoln
Jacoby, Julia
MacDonald, D. Stewart

Norfolk
Klopfer, Walter G.
Taulbee, Earl S.

NEW HAMPSHIRE
Bowen, Barbara
King, Francis W.
St. Clair, Walter F.

NEW JERSEY
Abramson, Leonard S.
Beran, Marianne
Feldman, Irving
Forrest, Carol W.
Frey, Harriet K.
Gersten, Charles
Goodman, Morris
Hahn, Albert R.
Morrow, J. Lloyd
Rockberger, Harry

Englewood
Cohn, Ruth C.
Haines, Miriam Stearns
Junken, Elizabeth
Lieben, Beatrice

Linden
Gasorek, Kathryn
Greenberg, Pearl

Maplewood
Kutash, Samuel B.
Simkin, James S.

Newark
Selig, Kalman
Steiner, Matilda

Princeton
Piotrowski, Zygmunt A.
Tomkins, Silvan S.

Upper Montclair
Brower, Daniel
Brower, Judith

NEW YORK
Abel, Theodora M.
Alexander, Robert H.
Amchin, Abraham
Ball, Josephine
Barrington, Benton E.
Bernstein, Mildred
Braun, Roslyn
Brecher, Sylvia
Bruce, Martin
Carr, Arthur C.
Chamouloud, Muriel
Cohn, Frederick
Davidson, Alene
Diamond, Gertrude S.
Fike, Irene A.
Filmer-Bennett, Gordon
Friedman, Howard
Gillman, Etta C.
Goodman, Harvey
Gurvitz, Milton S.
Hirsch, Janet F.
Holodnak, Helen
Joseph, Alice
Kaplan, Herbert
Kormreich, Melvin
Lee, Dorothy
Leopold, Julius
Libresco, Emile
Lord, Edith
Moreland, Margaret
Napoli, Peter J.
Puzzo, Frank S.
Rosner, Stanley
Rotman, Saul R.
Sanderson, Herbert
Schacht, Leatrice
Schubert, Herman J. P.
Seltzer, Samuel M.
Sharpe, Susie McMillan
Siegel, Edward L.
Siegel, Max
Steinzor, Bernard
Stone, L. Joseph
Topping, Mrs. Robert C.
Van West, Joan
Wagner, Mazie Earle
Wentling, Verda M.
Williams, Helen
Williamson, Margaret O.
Wilson, Mary T.

Bronx
Harris, William W.
Kingsley, Leonard
Levine, Abraham
Teich, Marianne

Brooklyn
Abbate, Grace McLean
Abrams, Elias N.
Anderson, Helen Joan
Harris, June
Harris, Robert A.
Krugman, Judith I.
Krugman, Morris
Lolis, Kathleen
Seitzman, Daniel
Shapiro, Irene
Spin, Lillian
Suessmilch, Frederick
Trachtman, Gilbert
Weiss, Herman R.
Wexler, Rochelle M.
Wood, Austin B.
Zadek, Mildred

Elmhurst
Rosenberg, Israel H.
Steiner, Meta
Zierer, Ernest

Flushing
Harris, Albert J.
Levenstein, Phyllis
Schonbar, Rosalea Ann
Spaney, Emma

Forest Hills
Machover, Karen
Machover, Solomon
Vaccaro, J. John

Garden City
Derner, Gordon
Margolis, Muriel
Parnicky, Joseph J.

Larchmont
Abt, Lawrence Edwin
Peatman, Lillie B.

Long Island City
Baron, Samuel
Levinson, Boris

New York City
Ackerman, Bernard
Alozery, Jessica Jervis
Anastasio, Mary M.
Aronson, Margaret R.
Aronson, Marvin L.
Auerbach, Aline B.
Barnett, Irving
Bartlett, Doris A.
Bellak, Leopold
Blum, Lucille Hollander
Boles, Glen
Bondel, Gertrude
Brody, Abraham
Brody, Gertrude
Brown, Fred
Bry, Mae G.
Burchard, Edward M. L.
Burgemeister, Bessie B.
Calabresi, Renata
Caligor, Leopold
Carroll, Clara
Cohen, Mathilde Weill
Cowin, Marion

Davidson, Helen H.
Deri, Susan K.
Dudek, Stephanie
Ellis, Albert
Emery, Margaret
Ephron, Beulah K.
Epstein, Hans L.
Faterson, Hanna F.
Fine, Reuben
Frank, Lawrence K.
Friedman, Alice
Fuchsman, Seymour
Gaudet, E. Louise
Gaudet, Frederick J.
Gelles, Herbert
Goldfarb, William
Gondor, Lily H.
Gordon, Thelma
Gottlieb, Sophie
Greene, Janet S.
Greenstadt, William
Gundlach, Ralph
Gurevitz, Saul
Gurvich, Bernice M.
Haber, William B.
Hammer, Emanuel
Harrower, Molly R.
Hertzman, Max
Holt, Robert R.
Houck, Dorothy
Jahoda, Hedwig
Johnson, Richard B.
Kaback, Goldie Ruth
Kadis, Asya
Kalinkowitz, Bernard N.
Kapit, Milton E.
Katz, Florine
Katz, Harriet
Kaufmann, Elizabeth M.
Kemple, Camilla
Kew, Clifton
Klein, Eva L.
Krafft, Margaret R.
Krugman, Dorothy C.
Krugman, Herbert E.
Landisberg, Selma
Laskowitz, David
Leder, Ruth
Levi, Joseph
Levinger, Leah
Lewin, Herbert S.
Mahler, Paul H.
Mann, Edna
Markham, Sylvia
McNeill, Harry V.
Miale, Florence
Mullen, Esther
Munroe, Ruth
Nagelberg, Leo
Neu, Ruth Warburg
Ochroch, Ruth
Oppenheim, Sadi
Paulsen, Alma
Porter, Lucille
Proctor, Paul W.
Ritey, Hector J.
Rodan, Henrietta Itta
Sander, Emilie T.
Schachtel, Ernest G.
Schachtel, Zeborah
Schattman, Esther Preger
Schillinger, Morton
Schulman, Doris
Schwartz, Arthur A.
Schwartz, Emanuel K.
Seidenfeld, Morton A.
Shoben, Edward J., Jr.
Shor, Joel
Siegel, Miriam G.
Sobol, Albert L.
Sosnoff, Miriam
Symonds, Percival
Tolmach, Regina E.
Vorhaus, David
Vorhaus, Pauline G.
Warner, Samuel J.
Weinrebe, Claire
Weissman, Serena
Wentworth-Rohr, Ivan
Werner, Kathryn
Wolf, S. Jean
Wolfson, Ruth
Woltmann, Adolf G.
Yudin, Sidney
Zucker, Luise J.

White Plains
Bloch, Beatrice
Hirning, L. C.

NORTH CAROLINA
Balken, Eva Ruth
Grassi, Joseph

Durham
Borstelman, Lloyd J.
Reichenberg-Hackett, Wally

OHIO
Alden, Priscilla
Allen, Doris Twitchell
Appell, Melville
Hopkins, Edith
Lehrer, Ruth
Loehrke, Leah M.
Murphy, Rev. Kenneth
Schwerin, Erna

Cincinnati
Graham, Virginia T.
Ross, W. Donald
Strauss, Elsa L.

Cleveland
Barkley, Bill J.
Friedman, Gladys
Friedman, Ira
Gardner, Ann K.
Nosal, Walter
Wallen, Richard

East Cleveland
Baker, Corinne F.
Levine, Phyllis R.

Shaker Heights
Grossman, Mrs. Marc
Hertz, Marguerite R.
Warshawsky, Florence

West Richfield
Reinthal, Mary E.
Witzeman, Evangeline

OKLAHOMA
Kates, Solis L.

OREGON
Berliner, Anna
Higginson, Gordon K.

PENNSYLVANIA
Abrams, Ray H.
Brandon, Grace H.
Cease, Eugene
Clauss, Helen
Cohen, William J.
Dunn, Michael B.
Frear, Edgar
Hammond, Eleanor
Hartzler, Ethel M.
Hirst, Carol G.
Levit, Herbert
Nikel, Frank
Platt, Henry
Rappaport, Sheldon
Rappaport, Sidney R.
Raub, Edwin S.
Ruhl, Mrs. R. Ernest
Sless, Bernard
Smolinsky, Harold J.
Stern, Phyllis Glaser
Stonesifer, Fred
Strait, Bennett
Weiss, Emalyn R.
Weiss, Sheldon W.

Bryn Mawr
McBride, Katherine
Schulman, Irving

Harrisburg
Hocker, Margaret
Oettinger, Mrs. Malcolm
Singer, Roland H.

Media
Morgan, Clellan L.
Morgan, Olive J.

Norristown
Cummings, C. Peter
Howland, Allan O.
Kessler, Mable G.
Ross, M. Eleanor

Philadelphia
Baron, Louis K.
Barratt, Emily
Blumstein, Molly G.
Cantarow, Elizabeth S.
Cunningham, Cornelia
Felzer, Irving
Hallowell, A. Irving
Hallowell, Dorothy K.
Kleinberg, Rosalyn K.
Marker, Beatrice W.
McCloskey, E. Venita Amsler
Peters, Marie Wilson
Rosen, Esther Katz
Saltzman, Marguerite R.
Seiler, Geraldine F.
Tuft, Carlyn M.

Pittsburgh
Brosin, Henry W.
David, Henry P.
Feldman, Dorothy A.
Kreczkowski, Joseph
Ledwith, Nettie H.
Lonstein, Murray
Mallinger, Betty
Rivers, Mrs. Hubert M.
Schanberger, William
Snyder, Marguerite A.

Scranton
Dominguez, Kathryn
Dougherty, Margaret

State College
Groff, Marne L.
Low, Howard
Wilcox, George T.

Swarthmore
Cox, Rachel Dunaway
Herrman, Katherine

Wilkes-Barre
Fry, Franklyn
Fry, Martha

RHODE ISLAND
Carpenter, Kenneth E.

TENNESSEE
Newman, Joseph
Steen, Thomas W.

Nashville
Billig, Otto
Kirk, Virginia

TEXAS
Foster, Austin
Goolishian, Harold
Miller, Carmen
Mims, Jean Giesey
Sulzer, Edward
Wickersham, Francis Myron

Houston
Josey, William E.
McCary, James L.
Motz, Gerald
Vinson, David, Jr.

Randolph Field
Barry, John R.
Kahn, Theodore C.

VERMONT
Eldred, Donald M.
Townsend, Marjorie M.

VIRGINIA
Buck, John
Caro, Elizabeth R.
Jeffreys, Alvis W., Jr.
Tallent, Norman

Charlottesville
Bachrach, Arthur J.
Carter, Linda Louise

Falls Church
Colm, Hanna
Horlick, Reuben S.

WASHINGTON

Davenport, Beverly

Seattle
Bogardus, Helen
Kogan, Kate L.
Kogan, William S.

Levy, Ruth Jacobs
Schmidl, Fritz
Skeels, Dell
Steisel, Ira M.
Zavinsky, Almena

WEST VIRGINIA

Spencer, Betty L.

WISCONSIN

Madison
Mathias, Rudolf
Robinson, Elizabeth Foster
Smith, Margaret

DISTRICT OF COLUMBIA

Washington
Broomhead, Elizabeth
Charen, Sol
Ives, Margaret
Kaplan, Norman
Mercer, Margaret
Van Alstyne, Dorothy
Woolf, Henrietta

HAWAII

Halperin, Sidney L.

FOREIGN COUNTRIES

AFRICA

Ainsworth, Mary D.

ARGENTINA

Schlesinger, Alicia de

AUSTRALIA

Cook, Philip H.

BRAZIL

Lopes, Jose Leme
Ribeiro, Rene

CANADA

Brougham, Norma
Ferguson, Kingsley G.
Francoeur, Thomas A.
Howard, J. W.
Record, Fr. Maurice
Shane, S. Gerald
Spires, Alan
Stephens, Gordon M.

Montreal
Allen, Barbara M.
Beauchemin, Jean M.
Calvert, Margaret
Clerk, Gabrielle Brunet
Cramer, Fern J.
Dorken, Herbert, Jr.
Greenberg, Nathan
Guindon, Jeannine
Halpern, Esther
Kral, V. Adalbert
Lehmann, Heinz
Lussier, Andre
Malloy, Helga
Malone, Anne
Manuilow, Tatiana
Mindess, Harvey
Morf, Gustave
Poser, Ernest George
Prados, Miguel
Spindler, Joan Elizabeth
Wigdor, Blossom

Outremont
Dufresne, Georges
Golick, Margaret

Toronto
Carson, Marjorie
Frankel, Esther

ENGLAND

Alcock, A. Theodora
Williams, Jessie M.
Wolf, Klara C.

FRANCE

Morize, Mrs. Andre

INDIA

Maiti, Haripada P.

IRELAND

Earl, C. J. C.

ISRAEL

Tel Aviv
Elizur, Abraham
Kadinsky, D.

ITALY

Ferracuti, Franco

MEXICO

Nunez, Dr. Raphael

SOUTH AFRICA

De Villiers, David Z.

SWITZERLAND

Buckle, Donald F.
Rorschach, Olga

VENEZUELA

Franzetti, Rosa Padlina de

MONOGRAPHS

No. 1 – PROJECTIVE TECHNIQUES AND PSYCHOTHERAPY: Examination of a therapy process through the use of the Projective Motor Sequence and Rorschach Technique by William H. Lundin. This is a study in which the Rorschach was administered six times and the Projective Motor sequence three times during the course of intensive therapy (100 hours). The presentation includes a detailed description of the patient's behavior, the treatment situation, and interpretations and comparisons of the test results as they reflect the therapy process. Price $1.50

No. 2 – A MANUAL FOR THE MAKE-A-PICTURE-STORY (MAPS) METHOD: by Edwin Shneidman. This monograph is a manual which presents detailed instructions for the administration of the MAKE-A-PICTURE-STORY Method and suggestions for interpretation. It includes numerous illustrations, several protocols, and a detailed analysis of one case. Price $2.50.

ORDER BLANK

Society for Projective Techniques and Rorschach Institute, Inc.
609 West 196th Street
New York 40, N. Y.

Enclosed are $.....for the following:

.....copies of Monograph No. 1 at $1.50.

.....copies of Monograph No. 2 at $2.50.

.....Journal Subscription at $6.00 (foreign $6.50)

Name: (Please print).....

Address:.....